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HEALTH TRENDS

in

SECONDARY EDUCATION

Fifty-three Schools Analyze Their
Health Programs

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Published by the

American CHILD HEALTH *Association*

450 SEVENTH AVENUE

NEW YORK

1927

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NOTE ON THE THIRD PRINTING

Since its publication in 1927, there have been two printings of this report. In this third printing, revision has been made of the bibliographies appended to each chapter, in order to include in them particularly valuable recent contributions in the field of health education in the secondary schools, and to provide annotations. The text is identical in detail with the original.

CONTENTS

		PAGE
	In Explanation	1
	Outline Used in Making the Study	4
Chapter I.	Plan of Coordination	12
Chapter II.	The Health Examination and its Uses	25
Chapter III.	Health Promotion and Health Training for Teachers	39
Chapter IV.	The Use of Hygienic Facilities	50
Chapter V.	Basic, Specific and Contributory Subject Matter	65
Chapter VI.	Physical Education	90
Chapter VII.	Home Economics	109
Chapter VIII.	Mental, Emotional and Social Health	127
Chapter IX.	Checking Up on Results	147
Chapter X.	Building a Health Program	153
	Index	159

IN EXPLANATION

IN THE elementary schools, the importance of a unified health program has long been recognized. Such a health program began with the protection of the child through provision of a healthful environment and health service on the part of the physician and nurse. Later came the promotion of health through opportunities for physical development, and still later, through guidance and instruction in health attitudes, knowledge and habits. Procedures are now fairly well standardized for the first six years in the elementary schools and everyone agrees that efforts should be centered on the formation of habits rather than on the teaching of hygiene or physiology.

This seems to be less true of the secondary schools. So many inquiries had come to the American Child Health Association in regard to the best procedure for secondary schools, and so little information had been gathered concerning existing procedures, that it was decided to make a study from the field. In November, 1924, through the educational journals of the country, an appeal was made to high schools to study their own health programs following an Outline to be supplied by the American Child Health Association, and in order to stimulate interest three awards totalling $1,000 were offered to the three schools showing the best programs. It was understood that the object was to obtain material for a printed report on the health problems of secondary schools.

One hundred and ninety-three schools wrote for detailed information and by March 1st, eighty-six had formally registered. Reports were to be in by July 1st, which allowed four months in which to do the work.

In the meantime an advisory committee, which eventually acted as an evaluations committee, was formed, with the following membership:

Dr. Otis W. Caldwell, Director, Lincoln School, New York City
Mrs. Henrietta Calvin, Director, Division of Home Economics, Board of Public Education, Philadelphia, Pa.

Mr. W. S. Deffenbaugh, Chief, City Schools Division, Bureau of Education, Washington, D. C.
Dr. Clark W. Hetherington, Professor of Physical Education, New York University, New York City
Dr. Josephine Kenyon, Research Associate, Institute of Child Welfare Research and Lecturer in Health Education, Teachers College, Columbia University, New York City
Dr. John D. McCarthy, Instructor in Health Education, New York University, New York City
Mr. Jay B. Nash, Director of Physical Education, Oakland Public Schools, Oakland, Calif.
Miss Sarah M. Sturtevant, Associate Professor of Education, Teachers College, Columbia University, New York City
Miss Florence E. Winchell, Head of Department of Home Economics, New York State College for Teachers, Albany, New York

The Outline which the schools used was carefully prepared by the staff of the Division of Health Education with the guidance of the advisory committee.

During the period of the Study many letters were received in the central office, telling of ways in which the interest was being stimulated among teachers and pupils—a very important outcome. Suggestive material was supplied by the Secretary of the Study, and schools were encouraged to correspond with one another. Each school was given a code number, which was used when the final evaluations were made. By July 1st, the final date, fifty-three reports had been received. These reports were judged entirely upon their face value, as it was impossible to visit all fifty-three schools, and the Committee unanimously gave the awards to

Jacksonville Consolidated School, Jacksonville, Arkansas
New Trier Township High School, Kenilworth, Illinois
DeWitt Clinton High School, New York City

and honorable mention to:

Berkeley High School, Berkeley, California
Manual Arts High School, Los Angeles, California
East High School, Des Moines, Iowa
Bradford Academy (Private), Bradford, Massachusetts
Milton Academy (Private), Milton, Massachusetts
Newton High School, Newton, Massachusetts
Central High School, Kalamazoo, Michigan
John Burroughs Country Day School (Private), St. Louis, Mo.
Central High School, Binghamton, New York
Lincoln School of Teachers' College (Private), New York City
Manhattan Trade School for Girls, New York City

HORACE MANN HIGH SCHOOL FOR GIRLS (PRIVATE), New York City
FAIRMOUNT JUNIOR HIGH SCHOOL, Cleveland, Ohio
HATHAWAY-BROWN SCHOOL (PRIVATE), Cleveland, Ohio
CENTRAL HIGH SCHOOL, Tulsa, Oklahoma
ST. THOMAS JUNIOR HIGH SCHOOL, St. Thomas, Virgin Islands

In the fall of 1925, two people, Dr. Edna Bailey, Director of Science for the University High School, Berkeley, California, and Miss Ethel Perrin, Secretary of the Study, visited seventeen of the schools with leading programs, in order to secure more material for the printed report. From the information thus gathered, together with the carefully prepared studies made by the schools themselves, members of the advisory committee and the staff of the Division of Health Education of the American Child Health Association, have prepared both a resumé of what has been done and forward-looking suggestions of what may be done in the future, presenting them in this pamphlet with the hope that it will prove of use not only to the schools which made this Study possible, but to all secondary schools.

The Division of Health Education wishes to express its appreciation of the service rendered by the advisory committee, particularly by Dr. Kenyon and Miss Sturtevant, and by Dr. Thomas D. Wood, Miss Anita Laton and Dr. Raymond H. Franzen, all of whom generously assisted in the preparation of material for this pamphlet.

This Study of secondary school health programs was initiated and guided by Miss Emma Dolfinger, Director of the Division of Health Education, whose death on January 19, 1927 was an inestimable loss to the field of health education.

OUTLINE USED IN MAKING THE STUDY

HEALTH Education can be promoted only by emphasizing all aspects of health — physical, mental, social, moral. The teacher of health should look for normal development of the child from all of these points of view. The ideal of health is not mere freedom from obvious deformities and pathological symptoms. It is the realization of the highest physical, mental and spiritual possibilities of the individual."

This quotation is taken from "Health Education: a Program for Public Schools and Teacher Training Institutions"— the report of the Joint Committee on Health Problems of the National Education Association and American Medical Association.

The American Child Health Association endorses this definition of Health Education and it is with these principles in mind that the following outline has been prepared for secondary schools interested in making a study of their health programs. The physical and mental aspects of the situation are sufficiently well standardized to make a taking of stock quite possible. The social and moral aspects are much more difficult to evaluate but they cannot be ignored. It is the distinct purpose of some of the questions to reveal to the schools using the outline, the manner in which they are meeting these responsibilities.

It is improbable that at the present time any school will be able to feel that it is carrying out even a majority of the activities suggested, since the outline was intended to set forth an all-embracing health program. By making clear, however, the strengths and weaknesses of a school, it may serve as a guide along the way to a complete, satisfactory and smoothly functioning health program.

OUTLINE FORM FOR A STUDY OF THE HEALTH PROGRAM

SECTION ONE

The first step in such a study is an inventory of conditions to which the health program must be adjusted.

DESCRIPTION OF SCHOOL

I. Number of pupils attending school.
   a. Boys. b. Girls.

II. Number of teachers in school.
    a. Men. b. Women.

III. Population of city or town or country served.

IV. Number of other secondary schools in this area.

V. Type of community served. This includes nationality, economic, occupational and social status.

VI. Type of school: Private, public, parochial, consolidated rural or type other than these?

VII. Grades included?

SECTION TWO

DESCRIPTION OF PROGRAM

I. General

A. What plan have you for coordinating all the factors contributing to your health program such as those described in the sections that follow?

B. Is one individual, a department, or a faculty committee responsible for this coordination?

C. What is the present position, training and experience of these persons?

II. Health Training and Instruction
(Meaning the Development of Good Health Habits, Desirable Attitudes and Practical Knowledge.)

A. *Basic Subjects:*

1. Secondary schools have an opportunity, through coordinated efforts of certain specialized departments, to provide scientific information applied to health problems. The following are suggested:

    Social Sciences.
    Biology or any of its branches.
    General Science.
    Chemistry.
    Physics.
    Home Economics (including instruction in nutrition, home nursing, first aid and related subjects).

2. For each subject in the above list that, in your opinion, contributes to health instruction in your school, give the following details:

    a. Name of course.
    b. Required?
        1. Of whom?
    c. Elective?
        1. By whom?
    d. Number of hours.
    e. Where in student's course.
    f. Text books, references, laboratory manuals and other supplementary material.

3. On what activities and interests natural to boys and girls of this age-group do you base such health instruction in any of the above "basic subjects"?
4. What results related to personal and community health, either in habits, attitudes or knowledge, do you achieve through each course? How do you check up on these results?
5. List other subjects—other than physical training—which contribute to your health program, and analyze the contribution of each.

B. *Specific Health Instruction:*

1. Examine following details concerning this instruction:
   a. Name of course.
   b. Required?
      1. Of whom?
   c. Elective?
      1. By whom?
   d. Number of hours.
   e. Where in student's course.
   f. Text books, references, laboratory manuals, and other supplementary material.
2. On what activities and interests natural to boys and girls of this age-group is this health instruction based?
   a. Illustrate, citing the specific life situations in school, home or community, which you are using in the above way.
3. Describe means employed to check up on the results achieved through each of these courses, in habits, attitudes or knowledge.
4. What is the school position, training and experience of the following teachers:
   a. Those who are responsible for the planning and supervision of this definite health instruction.
   b. Those giving the instruction to the pupils.

III. The Hygienic Arrangement and Administration of the School Program

A. *For Pupil:*

1. What is the maximum length of pupil's school day?
2. How is this time apportioned to the different types of school work?
3. What opportunity does your daily program give for recreation in addition to the regular physical education periods?
   a. How do the pupils use these opportunities?
4. Does the home study plan consider the amount of sleep and recreation needed by the pupils?
5. School lunch:
   a. Are you presented with a lunch problem because of distance between school and homes?

b. What are the qualifications of the person in charge of the lunch room?
c. What are the principles underlying selection of foods offered for sale in lunch room.
d. How do physical conditions contribute to the educational value of the lunch room, such as, time allowed for lunch, order of the room, seating and lighting facilities, etc.?
e. How is the lunch utilized as an educational factor?
f. Who is responsible for catering at school parties?
g. Are food sales for money raising approved by Department of Home Economics?

6. If the general discipline of the school contributes to the health program by giving the pupils poise and self-control through self-direction, how do you accomplish this?
7. What provisions are made for physically handicapped pupils?
8. What provisions are made for temporary disability?
9. When educational examinations are given, do you prepare the schedules with consideration for the health of the pupils?

B. *For Teacher:*
1. What hygienic facilities are there for teachers in relation to:
a. Rest.
b. Lunch.
2. In arranging the teacher's schedule, is rest taken into consideration?
3. If the teachers take recreational responsibilities after school hours, is the load equalized among them?
4. In making demands upon the teachers for extra-school responsibilities, are their own needs for recreation considered?
5. What responsibility does the school take in the living conditions of teachers?

IV. Physical Education
A. What is meant here by Physical Education is the "Big Muscle Activity Program" and includes directed exercise, games, athletics and dancing, under the supervision of the school.
1. Give following details concerning each separate activity in Physical Education:
a. Name of course.
b. Purpose.
c. General content.
d. Method.
e. Sex and qualifications of teacher.
f. Required?
1. Of whom?
g. Elective?
1. By whom?
h. Periods per week.
i. Length of periods.
j. Out or indoors.
k. Where in pupil's course.

2. List the above courses in their order of importance for developing the latent power for health.
   a. Justify this arrangement.
3. What uses are made of the results of the physical examination in planning the Physical Education program?
4. What change, if any, do you make in the program for girls during the menstruation period?
5. How is the problem of "Posture" taken care of?
   a. Describe the method by which you measure posture improvement.
6. What evidence have you that during leisure hours the pupils make use of activities taught as part of the Physical Education program?
7. Boys' Athletic Program:
   a. What is its chief aim?
   b. What proof have you that this aim is achieved?
   c. Analyze the boys' athletic situation.
8. Girls' Athletic Program:
   a. What is its chief aim?
   b. What proof have you that this aim is achieved?
   c. Rules, events and standards for boys' athletics are uniform and recognized. This is not true for girls' athletics. In coaching girls' athletics, are the same rules, events and standards used as for boys?
      1. If so, why?
      2. If changes are made, justify these changes.
9. Physical "ability tests":
   a. Boys:
      1. To whom given?
      2. For what objective?
   b. Girls:
      1. To whom given?
      2. For what objective?

V. Health Supervision of Pupils and Teachers

A. *Health Inspection:*

1. How do you handle problems of prevention of contagions?
   a. Is the common cold declared a communicable disease?
2. What study of absences through illness?
   a. How is this study used in your health program?

B. *Health Examinations and Their Relation to the Health Program:*

1. Physical Health (refer to the first paragraph of the introduction).
   a. Is a physical examination given?
      1. To pupils?
      2. To teachers?
   b. Purpose of this examination?
      1. For pupils?
      2. For teachers?

c. Procedure used:
   1. By whom administered?
   2. When in the pupil's school career?
   3. Is examination given in special room? If not, where?
   4. How many examined per hour?
   5. What do pupils wear during examination?
   6. Who is in the room?

d. Records:
   1. By whom are results recorded?

e. Interpretation and follow-up of results:
   1. By whom are results interpreted?
   2. What physical or functional handicaps do you make an effort to correct?
   3. What do you accept as evidence of correction?
   4. What general and specific plans have you for aiding the physically maladjusted pupil?

f. Additional information:
   1. Your particular situation may give rise to some problems not appearing in this outline. In that case include in study any activities which in your opinion seem important and analyze your reasons.

2. Mental Health (refer to the first paragraph of the introduction).
   a. Are mental examinations given?
      1. To pupils?
      2. To teachers?

   b. What tests are used?

   c. Procedure used?
      1. By whom administered?
      2. Qualifications of the examiner?

   d. Records:
      1. Who scores tests and records results? (Attach a sample copy of each record blank used.)

   e. Interpretation and follow-up:
      1. List the uses made of the test results.

   f. Additional information.

      Problems arising out of your particular situation which do not appear in this outline may hold an important place in your plan. Study all that in your opinion seem important.

3. Emotional and Social Health:

   The word "social" is here used in the sense of the ability to adjust oneself to situations and relationships in home, school and community.

Units of measure within these two phases of every Health Education program are, as yet, if they exist at all, in such crude stages of development that no actual examinations may be recorded. This does not mean that they are less important or less valuable as phases of general health but that the report regarding them must of necessity take a less definite form.

Such questions as the following may be asked:

a. What provisions are you making for healthy expression of the emotional life of the children? Be as specific as possible.
b. What attention is given to social adjustments in this adolescent period of the pupil's development?
c. Have you in any way provided for recreational guidance? Is there a director or committee whose duty is to coordinate all recreational factors in the life of all the pupils?
d. How is student participation in extra-school activities guided so as to secure the maximum health value, mental and social as well as physical?
e. Do you make use of the results of the physical and mental examinations and the pupil's educational status as aids in the social guidance? Tell how specifically.
f. In issuing working papers or in directing the pupil's future occupational activities, do you take into consideration his health records in relation to the demands which will be made on him by the conditions of the occupation? How?

VI. The Hygiene of the School Plant

Because of the detailed study already made on this topic, the following reference is given:

Standards For Elementary School Buildings, by Strayer and Englehardt, Teachers College, Columbia University, 1923.

This reference will enable those who so desire to evaluate their school plant in relation to recognized standards.

A. List such equipment of school buildings and grounds as in your opinion affects the health of the pupils.
B. How do you use these facilities for education of pupils in health?
C. Who is responsible for the hygiene of the school plant?

VII. Preparation of Teachers for Health Training and Instruction

A. What health requirements are there for the appointment of teachers?
B. If not already covered in the previous section, state the training and qualifications of the members of the faculty who are directly responsible for any part of the health program, including all "coaches."
C. What opportunities are open to the teachers for study of subject-matter and methods related to the teaching of health?
   1. How do you encourage your teachers to take advantage of these opportunities?

VIII. Evaluation

A. Considering your program as a whole, which of the main divisions in Section Two of this outline is your strongest asset?
   1. Why?

B. Which do you consider your weakest?
   1. Why?

C. On the basis of 100 points, set down the proportion you would give to each of the Divisions II-VII, inclusive.

D. Which part of your program do you plan to expand next?
   1. Why do you choose this part?
   2. How will you expand it?

Chapter I

PLAN OF COORDINATION

THE health program of the high school may be differentiated into three types of service. The first is the provision of a school environment which meets accepted standards of sanitation and which makes possible the practice of personal health habits by the student during his school hours. The second is the supervision of the health of the individual student, results to be measured in his health status and health behavior, rather than in his knowledge. The third includes all the contributions to health knowledge, practices and ideals which can be made incidental to the teaching of the subjects of the high school curriculum and through the conduct of extra-curricular activities. Any adequate program must include all three divisions.

This is borne out by an analysis of the returns from the fifty-three schools which recently surveyed their own health programs and whose detailed reports form the basis of this book. These reports show a tendency to define the types of service described above, to place responsibility definitely, and to begin to create standards of accomplishment possible under actual school conditions. It is evident that this has been done most successfully with regard to the environmental type of service; an excellent beginning has been made in service to the individual student's health development; but the third type of work, the overhead responsibility for health knowledge, practices and ideals, has scarcely been touched. This state of affairs is a challenge, not so much to health workers, as to educators and administrators. That part of the high school health program which is the business of the high school faculty and student body is the most backward and undeveloped part. The high schools have submitted to having much good done unto them in the way of various health measures; they have now to work out their own salvation.

It is probable that the most important factor in providing an acceptable school environment is the adjustment of the school task to the capacity of the student. All of the schools studied make some efforts in this direction. Grouping according to mental capacity, is being attempted, but no one is satisfied with the results. The tests available are not as useful for older children as for those of the elementary school level, and very few teachers can adapt high school subjects to the low capacity sections. There is nothing more important as a mental hygiene measure for high schools than the solution of this problem, which cannot be solved from the outside, but only by the schools themselves.

One division of school health service is concerned with bringing every student to his optimum state of physical well-being, and with training him in such personal health practices as will ensure the maintenance of this happy condition. The ideal of school supervision of individual health development is a new one, not inherent in the earlier efforts at medical inspection, hygiene teaching or physical education. There is a clear recognition of the task and successful provision for accomplishing it in some of the schools visited. The essential features of the plan followed by them are two: First, the organization of a group of specialists operating in relation to one coordinating and responsible person, designated by the principal as the "Health Counselor." Second, the education of every teacher, administrator and professional health specialist in the significance of the health service, to the extent of using its facilities in his own dealings with students, and of appreciating the relation of his own contribution to the whole.

From the reports submitted, it is evident that some secondary schools have a definite plan for coordinating their health activities, centralizing, in one person or in one group, the responsibility for the conditions and activities that affect the health of students and teachers. In seventeen schools reporting, responsibility is centered in one person; in seven, in a faculty committee; in five, in a department or in the heads of departments. Eight schools did not answer this question. Two schools place the responsibility on "each teacher." Two schools hold administrators, teachers and students responsible. In the

Virgin Islands, the Governor is responsible, and in four other localities, the city or district administration. Other schools report, "No Coordination."

To quote from the report made by a follow-up visitor to one school:

"Could not recognize any organization for health work. Very efficient city supervisors give continuity to policies. Local situation suffers seriously because there has been no definite administrative delegation of responsibility for health data and their use. Nurse has certain records, physical education director has other. Psychological records and behavior studies are elusive; some in dean of girls' office. Employment records both in office of commercial teacher, and in office of ex-nurse serving as vocational counselor for girls employed as domestics. Academic and attendance records in principal's office. Nobody sees all these about any one student. This is the result to be expected from a scheme organized by specialists for specialists. Nobody sees the whole child."

Contrast the following:

"There is a health counselor who coordinates all the work in health. She works with the doctor and nurse three hours of each week; she works with the home economics teacher and with her checks trays for adequacy of lunches chosen (once a month); she sees to it that publicity on health matters is prepared by the journalism class and appears in the school paper; she stimulates and assists in the preparation of posters, demonstrations and bulletin-board exhibits by various departments; she has all students in 7th and 8th grades one period a week in groups of twelve to fifteen, boys and girls separately, for hygiene instruction, in connection with which they keep a 'hygiene record'; in cooperation with the nurse, she sees to it that the doctor's recommendations are carried home; she makes contacts with social agencies for remedial work which cannot be provided by parents; she gives each home room teacher each month a list of underweight* students, with pounds underweight

*Recent research findings, and their interpretation have increased our knowledge of the relation of the height and weight measurements of children to their growth and nutrition, and necessitate an alteration in the use of these measures in health programs. See recent publications of the American Child Health Association, *Physical Measures of Growth and Nutrition, The Weighing and Measuring of School Children, and Nutritional Status Measurement,* listed in bibliography, pp. 89 and 151.

in each case; and she plans each month some special health effort to be carried out through the home room teachers. In this last, her aim is as much to educate the home room teacher as to reach the children. She prepares bulletins to be sent home to parents. She suggests various health projects to be carried out in English, social studies and science. In addition, any teacher may send a youngster to the health counselor at any time for special attention. She looks after first aid and minor troubles, and inspects returns after illness, during home room period. There seemed to be no member of the staff who was not in touch with the health counselor, in some way or other, and all of the youngsters seemed to know her.

"The faculty health committee consists of five members, each of whom chooses members of sub-committees. As a result, the whole faculty constitutes a health committee. The committee as such does not function extensively; the health counselor and the whole teaching staff constitute the machinery."

And the following:

"The principal looks to the health counselor as the person responsible for centralizing health work. She is a nurse but her functions as nurse are of minor importance. She has excellent cooperation from the administration, and excellent relations with classroom teachers. To her work as reported has been added a required course in hygiene for the 9th grade, boys and girls, in separate groups of 25 to 30. Her work is varied. To give her time for the teaching, a halftime assistant has been employed. Her work is divided as follows:

1. *Teaching:*

About ten 9th grade classes, one period a week. Home hygiene and care of sick twice a week. Talks to 'advisor rooms' when called for.

2. *Physical Examinations:*

Concentrated in first two weeks of semester. Clerical work of copies to parents and follow-up are also her responsibilities. Conference with advisor and parent on all cases of remediable physical defects.

3. *Daily Consultation Service:*

All absentees report to health counselor before re-entrance; parent's excuse checked by her, filed in advisor's room. All temporary illnesses, emergencies, cases of suspected infection, are expected to report to the health counselor at once—a strong feature of the work. The health counselor excludes colds when patient has a degree or more of temperature and when coryza is acute.

She keeps a record of these consultations and plans to hold conferences with students for follow-up of hygiene measures recommended.

She makes use of a 'Service Club' of 20 girls trained in home nursing to assist her in the school nursing service.

Any student may be referred to the health counselor by his advisor.

4. *Supervision of Underweight* Students:*

The health counselor arranges that these have a mid-morning lunch, supplied by cafeteria, supervised by the Service Club girls. A good variety of things is served: orange juice, chocolate, choc-malt, milk, malted milk.

5. *Conference with Advisors:*

On health conditions of their advisees. This is regarded by the administration as of prime importance. Not enough is known about the health of the pupils to make this service as valuable as it might be. The advisor uses the information when she visits the home of the pupil.

6. *Conference with Parents:*

Reports of medical examinations were formerly sent to parents,—a procedure which seems to principal of great value, and has brought good reaction."

The Health Counselor

The more clearly the functions of the health counselor are differentiated and the more fully his responsibility for coordination of all health work is recognized, the more effective the

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

health program is found to be. In one school the person designated as counselor is the physical director; in another, the school nurse; in still a third, the hygiene teacher. It does not seem to matter from which of these three groups the counselor is chosen. The choice between full-time special teacher of hygiene, full-time nurse and full-time physical education director seems to have been somewhat a matter of personality, but more a question of special interest and preparation in this field. No one is prepared to be health counselor for a high school by virtue of his training in any of these fields; it is a question of finding someone sufficiently interested to train himself for the task while he works away at it. It is even possible to select a teacher from another department, preferably the science department, provided he has administrative ability, with a broad conception of the health program and the part each member of the faculty can play in it. This plan has the advantage of proving to the faculty that the responsibility for such a program does not belong exclusively to the doctor, the nurse, or to any one department.

The chief duties which the health counselor was found performing were as follows:

1. The counselor assisted in the routine medical inspections, and interpreted these and their findings to teachers. For instance, in one school every class advisor was furnished with lists each month, showing students under her charge who were in the physician's judgment below par as to nutrition and general hygiene. In another school, the counselor went over the eye defects with the advisor, who was responsible for getting information and advice to every teacher dealing with students having seriously defective vision.

2. The counselor taught personal hygiene to small classes, with the definite objective of improving the health of the individuals taught. This was carried on intensively in the first year of the student's school career. It was based on thorough knowledge of the health status of every student, and guided by the best technical advice available.

Results were best where this aim was clearest, least confused with giving general information.

3. The counselor also carried on personal supervision of individuals who presented special health problems. In these schools, this group was about 10 per cent of the school population and included students returning after illness and those presenting constantly recurring minor ailments.

4. He reported to the principal monthly on absences due to illness, recommending policies in this field. In two schools, a remarkable reduction in absence rate had been achieved during the incumbency of the health counselor. The rate in these schools was less than half that in the other schools visited.

5. The counselor was also responsible for school health publicity, through bulletins, newspaper, posters, exhibits, and through health talks in school and out.

6. In two schools, the counselor maintained a very close relation with the other teachers, giving counsel on personal health problems, and furnishing material for health teaching relevant to the regular academic classes.

In schools without a health counselor type of organization, the above duties were curiously distributed, some being performed several times over by as many departments (as supervision of underweights* by three departments simultaneously and independently) and others not performed at all. This confusion is at present the greatest drawback to progress. A modern secondary school of a thousand or more pupils, is and must always be a very highly organized institution. It is characteristically an aggregation of specialists, the teaching staff, whose relations with students are scheduled and adjusted by another group of specialists, the administrative staff. Each one recognizes that concern for the physical well-being of the student is the business of all teachers and administrators, but there is evident a very real tendency to delegate this responsibility to another specialist. The further recognition that the

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

physical well-being is most intimately related to the academic and moral and social well-being of the student, is appearing in the more progressive of the schools visited.

A good deal of the reluctance of teachers to assume responsibility for health, arises from an unwillingness to get into another teacher's proper field. As has been said, high school is an organization of specialists, and a specialist is a person highly trained in minding his own business, which involves letting alone the business of others.

Where there has not developed any centralization of responsibility, records are not so well kept, are not used for their maximum benefit to students, and there is a considerable amount of overlapping in some matters and a corresponding neglect of other aspects of health.

The strongest conviction, as a result of this survey, is of the necessity of providing a health counselor, or the equivalent. In an organization of specialists, health must have its own specialist. For securing maximum effectiveness in the application of the services of specialists to the welfare of the individual pupils, the health counselor is by far the best device revealed by the Study, and must be counted as well worth its modest cost. It should be possible to work out the training necessary for such a specialist in secondary school health, and offer it in several educational centers in extension and summer session work, in order that nurses, physical directors or others may improve their preparation for this service, as rapidly as the need for the service is recognized and positions created. There should be no attempt to make this a full-time position. The person holding it should have other definite work in some department of the school. Clerical assistance can be provided which will make this possible, even in a very large high school.

The school physician's relation to this program is an essential one. For the school as a whole, he is responsible for communicable disease control. In meeting this responsibility he relies on the health counselor for the first warning of an epidemic, and for carrying out the defensive measures which he suggests. With regard to the individual student, the school physician determines whether he is free from serious health handicaps, whether he can profitably and safely take part in

athletics, and whether he is, from the medical standpoint, able to carry out the ordinary school-and-home routine. Medical inspection gives the individual a baseline, from which every boy and girl must begin constructive work for personal efficiency. This service is not remedial or even diagnostic in any adequate sense. There is no tendency to replace the family physician by the school physician, even in the field of preventive medicine.

The relation of the physical director to this program of constructive health supervision of individuals is quite as vital as that of the physician, the dentist or the nurse. The tendency, generally realized by the physical educators themselves, has been to leave too much on their shoulders. This arises out of failure to recognize that physical training has other and different contributions to make to the education of youth. In a very small school, the physical director functions admirably as health counselor, but in a large school such a combination of responsibilities would make a load too heavy for one person.

The duties of the health counselor may be summed up as follows:

1. To understand and be able to interpret to the teacher and administrator the physical, medical, dental, and psychological examinations. In every school studied where there was a counselor she was present at and assisted in the routine medical inspection.

2. To supervise the sanitation of the school, especially as to air conditioning and provisions for preventing spread of infections.

3. To teach personal hygiene in such a way as to improve the health of the individual students taught. Each student, in the best examples seen, made his own health problem his major project. The work was carried on intensively in the first year of the student's school residence.

4. To carry on personal supervision of individuals, not first year students, who present special health problems,—in these schools about 10 per cent of the school population. This calls for conferences with students, advisors, teachers, parents.

5. To see all students returning after absence on account of illness, study their needs, and supervise their readjustment.

6. To study attendance records and report to principal monthly on absences due to illness, classified by causes; to recommend policies in this field.

7. To study cases of minor ailments and disabilities, as shown in physical education and rest-room records. Supervision of these students as in No. 4.

8. To prepare or supervise publicity on school health for school paper, bulletins for advisors, letters to parents, school and neighborhood posters, exhibits, etc.

9. To give talks in this general field to classes, advisory (home room) groups, parent-teacher groups, and faculty meetings.

10. To give counsel to teachers who apply for guidance in personal health problems.

11. To see that the students needing special attention are referred to the school physician, and by him to the family physician.

For adequate preparation for such a position a teacher needs the following:

1. Good scientific training in personal hygiene, communicable disease control, and school hygiene.

2. Thorough mastery of modern teaching technique. This means practice under direction.

3. Familiarity with the organization, aims and limitations of a modern high school.

4. Intelligent appreciation of the aims, ideals and practices of the best type of physical training and home economics.

5. Training in health publicity.

6. Training in care of emergencies, simple nursing procedures, detection of departure from normal health in students and teachers; ability to interpret technical records to advisors, teachers, parents; ability to work with school physician, etc., and to keep and use records intelligently.

7. Sound scientific knowledge of intelligence tests and psychiatry applied to behavior problems. Perhaps a course on "Mental Growth and Adjustment of Adolescents" might cover this but as the health counselor now operates, less use is made of this than any other of the items listed. Enough of this material might be incorporated in the special "Course for Health Counselor" to start a good worker thinking and to safeguard him from misconceptions and fads.

In checking the programs of the schools when visited against their programs of the previous year when the reports were made, many changes were found. These usually indicated a tendency to slough off "health stunts" and settle down to a program so thoroughly integrated with the general school program that very few procedures stood out in the minds of teachers or pupils as "health measures." The sounder the program, the less it seemed to be in evidence.

Some changes were due to change in personnel of the teaching or administrative staff. In one school, a complete change of staff occurred, and yet the whole program, with the exception of the teaching of one course, was in operation and distinctly recognizable as the one reported. This seems to indicate emphatically that a secondary school health program is a whole-school, whole-community endeavor; not a one-man or even a one-department affair.

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* While this publication is listed here only, it contains much that is of value regarding the topics in each chapter of this book.

health service, teacher education and home and school cooperation, which are also of interest to the secondary school teacher.

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Chapter II

THE HEALTH EXAMINATION AND ITS USES

IN the beginning the chief purposes of health supervision were, first, the discovery and quarantine of communicable diseases and, second, the discovery of defects and deformities. Both of these purposes were negative in their application and implication.

In the light of newer concepts of health, the health examinations and health supervision whereby the health status of an individual student is determined, are no longer regarded as ends in themselves, but only as first steps in a health program. Health supervision is concerned with bringing together and harmonizing the efforts of home and school for improving the health of students.

So great is the potential contribution of health supervision to the fullest mental, emotional and social health of school children when its program interlocks with the other school agencies, that this cooperation has become an essential responsibility. Specifically, health supervision aims to promote individual and group health by means of a thorough and positive health examination for all students; to secure the correction of remediable defects; to protect students and teachers against communicable diseases; and to assist other school agencies, in their effort to promote student health, by making accessible to them the knowledge of conditions revealed by the health examination.

School policies and programs are being increasingly judged by their specific contributions to the development of health and fitness among students. As study has been made of the parts of the school program pertaining definitely to health it has been learned that the effectiveness of any one part depends to a considerable degree on the program as a whole and the extent of interdependence of the various parts of the program.

It is for this principle of correlating health supervision of students in secondary schools with the other school agencies for social, mental and emotional health that the reports of the fifty-three secondary schools making the Health Study were closely examined.

Purpose and Personnel

Only one of the fifty-three schools whose answers were tabulated reports definitely that no examination is given. A few replies are vague on this point. Most of the schools report some kind of annual examination, varying widely in extent and thoroughness, both being dependent on the purpose of the examination and the number and qualifications of the persons giving it.

The purpose of the examination appears to determine to a considerable extent the personnel, the duties of the staff members in the health and allied departments, and the subsequent use made of the examination findings. One school reports:

> The examination aims (1) to find out the pupil's past health, particularly what infectious diseases he has had, operations, habits, etc; (2) to estimate his physical fitness and ability to undertake the school program, both scholastic and physical; (3) to find abnormalities, record them, confer with the parents when special treatment or understanding is required and follow up the condition while under school supervision.

The purposes reported by the remainder of the schools fall approximately into the following grouping:

For selection of teams and physical activities.

For a better understanding of the pupils by the teachers.

For discovery and correction of defects.

For knowing the past health of the pupils.

For an estimate of the child's ability to undertake the scholastic and physical program of the school with the intention of adjusting both the program to the pupil and the pupil to the program.

Evidently there is need of some standardization of purposes of health examination.

The persons giving the examination are reported to be the doctor; specialists in vision, orthopedics, etc.; nurse; health

counselor; physical education instructors; or some combination of these.

On the whole, it may be said that in the schools where the health of the whole child has been seen as a unit, the examination has tended to become less specialized in purpose, more comprehensive and constructive in intent, and of more value to the health of the students. For example, health examinations should be made the basis for choosing pupils for teams and physical activities, but it is an error to make this the chief purpose of the examinations. Two schools, at least, show the comprehensive purpose of a health examination and its integration with all the health and scholastic agencies in the school.

The Extent of Examinations

The extent of the examinations of students is shown by the various records used by the health service for recording the results. As reported, the examinations range in extent from the inspection of eyes, ears, nose and throat by a nurse or physical training instructor to a rather complete examination, both mental and physical, by physicians and specialists. The thoroughness of the examination depends not only upon the personnel giving it but also upon the time spent in examining each pupil. An important point here is that where the examining physician is paid on a time basis the examination is more thorough than where he is paid per student. The time spent for each examination ranged from twenty-five students examined in forty-five minutes, where the physician was paid per student, to a leisurely, thorough examination, where the physician was paid by the hour. In the school health examinations the lack and need of standardization is apparent with respect to thoroughness.

Records

Health records facilitate the use of health examinations for follow-up work. The purpose of records is to give a living, growing picture of the whole child—physical, mental, emotional and social. This is possible only when the record of each child brings together somewhere the evidence of his growth and progress as revealed by periodic health examinations, mental examinations, intelligence tests, physical ability tests, aca-

demic grades, vocational fitness, character, and social and psychological development.

Records may be of two kinds, (a) separate ones kept by the various departments or persons concerned with children for the sake of a picture in detail, and (b) a composite, which gives a picture of the whole child. They overlap but are not identical; each fills a specific and particular purpose. Both may be used in any one school. Where only separate records are kept they are usually unrelated and give only fragments of a picture of the individual. And fragments, at best, are faulty, because they tend to distort. It is only when the physician, dean, advisor, teacher, physical education instructor, psychologist and psychiatrist (where one is employed), health counselor and others bring together their opinions and findings in a central record that there is a dynamic picture of the living, acting, behaving, responding, adjusting, developing, growing boy or girl. Such a record ideally includes all the conduct influences and the adaptation of children to school, with a forward look to vocational and social fitness and adaptation.

There are two essential qualities for records: First, they should be cumulative so that the present picture of any boy or girl may be seen, at a glance, as reflected against the past record of development or influences that might have contributed to it. The other quality is that they be as inclusive of opinions and findings as the administration of the school makes feasible and possible. The minimum of the inclusive quality would be a combination of the health records and the academic.

The record forms sent in with the self-studies were of many types. These forms indicate the extent of the health examination, but not the further use made of the findings. One type of record is that which presents a composite picture of the child and includes, in a rather compact form, the student's academic record, results of health examination, intelligence rating, character development, vocational preferences and fitness, and absences.

Interpretation of the Findings

The records of the health examination, to be of greatest use in follow-up work need to be interpreted to teachers, advisors and parents.

The interpretation of the findings is reported by certain schools to be done "by the teachers." Who interprets these findings to the teachers is not stated. It is hardly probable that they were present at, or assisted in, all the examinations given. In some instances it is evident that the interpretation is taken to mean the explanations made to parents regarding their children's defects and the reasons why these should be corrected. The question was meant to cover more than this: not only the defects, but the whole condition of the student, favorable as well as unfavorable, and just what that condition implies; not explanations to parents only, but to all the members of the staff who are, or should be, interested in the student's health and welfare. Staff members need this information to guide them in assigning work for a student and in forming their attitude toward him. In some schools the interpretation of the findings is reported to be made by the physician or the nurse, in others, by various specialists or by some other member of the teaching staff. Where the responsibility rests with a staff member qualified for this important part of the work, admirable results are being achieved. It is essential that such a person be tactful, cooperative, well trained, and equipped with a point of view of the unity of physical and mental health, whether he be doctor, nurse, health counselor, physical education teacher, or other staff member.

Making Use of the Findings

A health examination is only an inquiry into a condition. Such an inquiry or survey implies a second step toward maintenance or improvement of that condition, based on what the examination reveals. It is the second step, the follow-up, which gives any value whatever to the first step, which is the examination.

Eight of the fifty-three reports tabulated contained no information regarding the uses made of the health examination; five others were rather vague on this point, and four schools reported that no use was made of the health examination findings.

A Variety of Uses

It is not possible here to go into the relative value of the various procedures of follow-up mentioned in the schools because the results reported are not comparable. From the reports of thirty-five schools a list was compiled of the uses made of examination results, some few schools using practically all of the methods listed below:

Basis for grading all classes in physical education.
Making general program adjustments.
Organization of special physical education classes, as in the case of posture, or exemption from other classes in physical education.
Choice of students for motor activities and for teams.
Basis of selection for nutrition work.
Referring of students to physicians and clinics for correction of defects.
Conferences with parents on the need of correcting their children's defects.
Reports to parents of defects found.
One consideration in granting working permits.
Reports of results of examination to psychiatrist, psychologist, health counselor, dean, advisor, or other authorities whose duty it is to aid in the adjustment of the individual.

These various modes of follow-up do not overlap nor does any one of them make any other one nonessential; rather, they dovetail to make a complete picture. Conferences by appointment with parents, however, may advantageously supplant the method of notifying parents; nevertheless, in any one secondary school, it would be consistent to have all these methods operating at the same time.

Use in Health Teaching

An admirable use of the results of health examinations was described by one mid-western school. There the health counselor used them in a constructive way in her hygiene classes for health lessons and for the furtherance of defect correction. This may raise the question as to advisability of the health service aiding teachers in the use of the health findings. When properly safeguarded, to keep the teaching positive and prevent its becoming negative, such aid to teachers is decidedly advantageous. This assumes that the person who undertakes the guidance of teachers in the use of examination results is personally adapted to this work and adequately trained for it.

Use in Making Individual Adjustments

As a general statement it may be said that the chief use of the findings of health examinations is that of making individual adjustments according to individual needs. Among the schools studied, the most general application of the health examination findings was made by the physical education group who used them principally as a basis for the formation of special program classes and for exclusions from all or a part of the work, with the substitution of rest periods when advisable. Where a student is excused from the regular physical education period, provision should be made for a program adapted to the child's condition and need, by rest periods, adjusted physical activity, or encouragement of the student to change his daily habits of living.

One special distinction between the follow-up in the elementary school and that in the secondary school is the noticeable lack in the latter of special classes, except in the case of defects in posture. This may be due to the survival principle. Yet for the few who are below normal because of defects, some provision needs to be made by adjusting the environment to the individual. In the schools recognizing the need of individual adjustments, either of student to environment or of environment to student, aid in making the adjustment is given by some person or persons whose business it is to render such aid—dean, nurse, health counselor or physical education instructor. In a school which offers an excellent illustration of such use of the health examination findings, the advisor used them in a visit to the home for the purpose of getting defects of vision and hearing corrected. They were used also by the advisor in fitting the academic program to the student. In another school the findings were used by the psychologist in making individual adjustments.

While it may not administratively be a function of the health service to carry the follow-up to its logical conclusion of individual adjustments by advisors, deans or health counselors, it is nevertheless a function and a duty to make the complete records available to those concerned with adjusting the balance between individual students and their environment. Many of the real or potential emotional maladjustments of

students find their beginnings in a physical maladjustment that might easily be prevented if the advisor, dean or teacher were familiar with the condition and realized its significance to the child. Invariably the health examination is the starting point in seeking the cause and cure of maladjustments. To insure the full and adequate use of examination data by teachers and advisors, it is essential that the interpretation of the data be the responsibility of some one person. This person may or may not be an administrator in the health service. What is important is that he or she be adequately prepared for this type of work. What constitutes adequate training has been discussed in Chapter I, "The Plan of Coordination," under the subject of Health Counselor.

Correction of Defects

A very general application of the findings of health examinations is in the correction of defects. The reported procedures employed for getting defects corrected are:

Notification of parents.
Conferences with parents.
Use of clinics established by the school or those conducted by health agencies in the community.

It is not possible to establish the worth of each of these methods or procedures, since the results reported are not comparable; but it is a fairly accurate estimate that notification alone resulted in comparatively few corrections of defects. Some of the schools report conferences as the chief method employed. One school sends a notice to parents after the examinations have been made, asking them to come to the school for a conference relative to their children's examination findings. Other schools have conferences with parents through visits by the nurse, teachers or advisors.

The replies from thirty-six schools to the question, "What physical or functional handicaps do you make an effort to correct?" gave the following list of disorders: poor posture, malnutrition, defects of vision and hearing, adenoids, diseased tonsils, defective teeth, skin diseases, poor complexion, constipation, chronic appendicitis, anemia, dysmenorrhea, cardiac and circulatory disturbances, lung disorders, chorea, nervous-

ness, enlarged thyroid, and after-effects of infantile paralysis. Some of these were listed by only one school; posture and defective teeth by nearly all schools. Pediculosis is also mentioned as a condition sometimes requiring attention even in secondary schools.

One school submits the following report of improvements made as a result of follow-up work:

	Weight*	Posture	Specialist Eye Ear Nose Throat	Teeth
Results of physical examination	43% perfect	53% perfect	58% perfect	34% perfect
Results after follow-up work (3 months)	60% perfect	93% perfect	95% perfect	93% perfect
Percentage of improvement as a result of follow-up work	17%	39%	38%	54%

Another school reports:

	Dental Examinations	
1923	Total number examined	236
	" " defective	28
	" " showing corrections	188
	" " dirty teeth	29
1924-25	Total number examined	260
	" " defective in April	8
	" " malocclusions	10
	" " dirty teeth	20

Still another school reports upon the results of three different programs—

A: a group taking regular gymnastics.

B: a group taking one semester of individual work.

C: a group taking two semesters of individual work.

A. A study of backs of the girls who were taking regular gymnastics and swimming at the first examination showed that 50 per cent had some defect. The second examination showed the same per cent resulting in no loss or gain. Analyzing the parts of the back the following was found: First examination—shoulders 60 per cent uneven. Second examination—64 per

* For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

cent uneven, showing a loss of 4 per cent. First examination—45 per cent who showed spinal rotation. Second examination—42 per cent, a gain of 3 per cent. Deviation showed the same results as rotation. Hips showed that 53 per cent were uneven at the first examination and 48 per cent the second, a gain of 5 per cent.

Eighty-seven per cent of the girls had faulty posture in September and 62 per cent in June, a gain of 25 per cent.

Nine per cent had bad feet in September and 4 per cent in June, a gain of 5 per cent.

Eight per cent had defective teeth at the time of the first examination and 7 per cent at the second, showing a gain of 1 per cent.

Fifteen per cent had defective tonsils in September and 8 per cent in June, a gain of 7 per cent.

B. Of the girls who had one semester of individual work, 29 per cent of the backs were defective at the first examination and 25 per cent at the second, a gain of 4 per cent. The gain was shown in each part of the back except in deviation where there was a loss of 5 per cent.

Forty-eight per cent of the girls had faulty posture in September and 53 per cent in June, a loss of 5 per cent. A loss of 2 per cent was shown in feet—14 per cent at the first examination and 16 per cent at the second. Three per cent of the girls corrected their defective teeth but 10 per cent more had hypertonsils.

C. A gain that is more marked is shown in the cases of the girls who have had two semesters of individual work, in all except rotation and tonsils, the former showing a loss of 7 per cent and the latter 9 per cent. The gain in backs as a whole was 13 per cent in comparison with the gain of 4 per cent in those who had had one semester of individual work and no gain or loss of those who had had none. The same gain is shown in each part of the backs.

The biggest gain is shown in posture. All girls entering individual gym in the fall had faulty posture. The gain was 64 per cent, only 36 per cent having some defect in June. The gain in feet was 5 per cent, in hearts 1 per cent, in teeth 2 per cent and the loss in tonsils 9 per cent.

It is evident that many of the schools recognize the importance, in connection with the program of defect correction, of having the physicians in the community understand the work of the school health service and of having them in sympathy with it. The school physician is better prepared than the school nurse to establish the spirit of friendly cooperation between the school and the physicians in the community.

Where parents are unable to meet the expense of corrections, it becomes a responsibility of the school to find a way whereby the needs of the child can be met. To meet this situation many of the schools report clinics organized by the school or the use of community health agencies. One rural school

found it necessary to set up a school clinic for the removal of children's tonsils where the examination showed need of removal. The use of dental clinics for the cleaning of teeth and for some corrections was reported by several other schools.

By the use of every possible means for making corrections and adjustments for pupils, both at home and at school, a health service fulfills its whole obligation to bring its special health or medical knowledge to bear upon the problem of individual students for the maximum development of physical, mental and emotional health.

Prevention of Communicable Diseases

In secondary schools the problem of preventing the spread of communicable diseases requires alertness and care but does not demand the same expenditure of time and effort that is required in the lower grades. A certain amount of immunity has undoubtedly been gained by the time of adolescence. Furthermore, students of high school age are trained somewhat in taking definite measures of precaution themselves. There remains the need, however, of inspections by the nurse or teachers. Most of the schools making the Self-Study state that attention is given to this aspect of health supervision, but by whom is not made clear and there is a conspicuous lack of uniformity in method. It makes little difference whether the inspection is made by the nurse, teacher or advisor provided it is done expeditiously and directed constantly and constructively toward the further development of self-direction and the acceptance of responsibility by individual students.

Colds

Colds probably make up a large part of the "causes of absences" among students in secondary schools. Three or four of the schools are trying to meet this problem by excluding students with colds during the catarrhal stages. One school has successfully enlisted the cooperation of the parents in making exclusion for colds a practical and functioning rule. Another school has had a similar rule for five years. It requires the education of both parents and students to make

such a rule effective. An interesting noticeable result of the exclusion of all colds in both schools was the conspicuous lowering of their absence rate. In a third school, students who have a degree of temperature are sent home. The absence rate there is much lower than the average rate for the schools studied. These schools take the important precaution of requiring that all students be inspected by the nurse, doctor, health counselor or physical education instructor before reporting for admission to the first class after an absence.

Study of Absences

Where absences in secondary schools have been the focus of study, some important advances in practice have been made. Such studies have resulted in the isolation of exposed children rather than the closing of a grade or a school. They have revealed the fact that minor ailments are the chief offenders in causing students to lose time from school; hence, the attack on colds. Such studies have also been used to find out what additions to the health program are needed.[1]

Certain other schools are making analyses of the causes of absences as a guide in determining health administration practices. One school uses the study of absences as one measure of the health program as a whole. The studies here mentioned should be suggestive to other schools which have not yet undertaken similar analyses. A study of absences is very illuminating in respect to health problems that concern the health supervision service of any school.

Recommendations

The following may serve both as a summary and as recommendations suggested for increasing the usefulness of health supervision in a secondary school. There may be other recommendations equally valuable. These are not exhaustive.

It is recommended that:

1. The causes or contributing factors of physical maladjustments be discovered at school and eliminated. These

[1] Richard A. Bolt, "Summary of Study of Health Conditions in the University High School," *University High School Journal*, Oakland, Calif., Vol. V, No. 4, Jan. 1926, pp. 252-262.

include poor lighting, ventilation, arrangement of the school day, desks, etc.

2. Home visits be made to find causes or contributing causes there, followed by an effort toward getting correction of the causes.

3. Correction of correctable defects be furthered through cooperation with parents, family physician and through use of school and community facilities.

4. Program adjustments be made for handicapped children.

5. Special provisions be made for those children with correctable defects until defects can be corrected.

6. Health record be used as a basis of vocational direction and vocational fitness. For example, a person with less than one-third vision in each eye should not be allowed to work about moving machinery. Children should not be allowed to go to work until all correctable defects are corrected.

7. Cumulative health records be used in addition to single records to give a complete picture of each student.

8. Health records be made available and useful to all of the school staff authorized to use them for aiding individual students to achieve their maximum in physical, mental, social and emotional health.

9. A study be made of students' absences for the purpose of determining health policies and administrative practices.

10. Health records be used by advisors, deans, health counselors, and others in making academic programs for individuals, in finding causes of maladjustments and in gaining cooperation of parents.

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White House Conference on Child Health and Protection. Section III C, Committee on the School Child. *Report of the Subcommittee on Medical Service in Schools.* In preparation.

Wood, Thomas D., and Rowell, Hugh Grant. *Health Supervision and Medical Inspection of Schools.* W. B. Saunders and Company, Philadelphia, 1927, 637 pp. 7.50

A very complete discussion of the organization and administration of health service in the schools.

—*Health Through Prevention and Control of Diseases.* World Book Company, Yonkers, New York, 1925, 122 pp. 1.00

The plan or program set forth is intended for both school people and parents. Some of the subjects treated are: what the home, the school, and the pupil can do to control disease; how to know which children are susceptible; how to discover health disorders, and what to do when they are discovered; what to do in a classroom exposed to contagious disease; how to plan for readmission of pupils; standards for exclusion and quarantine; classroom reports with sample charts; how the different contagious diseases are spread.

Chapter III

HEALTH PROMOTION AND HEALTH TRAINING FOR TEACHERS

IN the past the health of the school teacher has been definitely her own responsibility. But that is no longer true. As school organization in all phases of education has developed and expanded, school administrators have come to feel that the health of the teacher is of first importance to them as well as to herself. The work of the classroom has become more complex and the new responsibilities of education make it increasingly necessary for teachers to guard against nervous strain. The former custom of leaving the teacher's health to chance or to the individual's own common sense has been found costly in educational and money values.

Money Value of Health

While the health of teachers has both educational and money value it is the latter value which has been most emphasized in the past. A study of teachers' absences readily demonstrates the financial worth of health. In a recent study of the causes of absences of Cleveland teachers, 19,000 school days were lost in one year among 4,000 teachers; the cost of the loss was approximately $300,000.[1] *The Elementary School Journal*,[2] quoting the *London Times* relative to the health of British teachers, states that teachers lose, on an average, about 7.3 days a year. That is equivalent to an average of about 3.5 per cent of the possible school days for each teacher. Because the money value of the teacher's health has been so readily demonstrated we have been led to think that the records of attendance adequately measure the value of the teacher's health. Certainly such a saving of school funds as is pos-

[1] *Report of the Cambridge Health Education Conference* (New York: American Child Health Association, 1924), pp. 14-15.

[2] "The Health of Teachers," *Elementary School Journal*, XXVI (1925), 249-251.

sible through prevention of absences would alone warrant every effort to raise the health level of teachers.

Teaching Efficiency and Health

The educational value of buoyancy and wholesomeness on the part of the teacher is less susceptible to objective demonstration, yet it surpasses even the financial value that accompanies regular attendance. It is not sufficient for the teacher merely to be able to appear before her class; it is of vital importance that she radiate health and vigor. Sound physical and mental health for the teacher is basic to sound and efficient teaching. Dynamic, skillful teaching demands of the teacher alertness, judgment and the ability to meet all situations with calmness and self-possession.

We are beginning to appreciate what the child gains through the teacher's healthful example. Impressionable youth is more likely to respond to the practices of the teacher than to her precepts. The source of much of the teacher's success is her vigorous physical health and normally functioning wholesome personality. The vigor needed for efficient teaching makes the promotion of the teacher's health one of the chief concerns of the school administration.

It is significant that in a study of the health of teachers in New York State, made by a Commission of which Dr. Thomas D. Wood was chairman, supervisors classified 40.3 per cent of the teachers as physically handicapped for teaching.[1] The report stated also that 7.1 per cent of the teachers had had their efficiency impaired while under observation, and attributed 90 per cent of this impairment to ill health or unhealthful living and teaching conditions. It is apparent, then, that much of the ill health and inefficiency in the classroom is avoidable. Provision of rest rooms, rest time, better ventilation, and proper facilities for meals; introduction of health examinations of teachers with health qualifications for employment and certification; organization of health insurance and retirement funds; improvement of teachers' living conditions; ad-

[1]Thomas D. Wood, *Health of Teachers.* (New York: Brief Report of Commission on Welfare of Teachers of New York State Teachers Association, 1916) (out of print), 5.

justment of the teacher's load to extra demands,—all of these will be followed by a marked improvement in the health and efficiency of teachers. Many school administrators are providing these facilities as rapidly as they can. They are, in turn, requiring that teachers promote health among pupils by direct health instruction, by developing in them health habits and attitudes, and by exemplifying health themselves.

Health Qualifications

The desirability of having some health qualifications for the employment of teachers has been recognized by various groups for some time but not until recently has its importance been realized by school administrators. Dr. Louis I. Dublin, of the Metropolitan Life Insurance Company, after a study of approximately 4,000 absences of New York City teachers in 1916, recommended "a selective examination of applicants for employment with especial reference to neurasthenia * * *."[1] In the New York State report on the Health of Teachers, it was the opinion of supervisors that "11.9 per cent of their teachers were unfit for the profession from the start—either because of unsuitable temperament, or improper physical condition."[2] A study relative to absences among London teachers corroborates these figures and opinions.[3] It is stated that of the absences 88 per cent were caused by 21 per cent of the teachers and 43 per cent were caused by 3 per cent of the teachers. An adequate selective examination and high health standards of employment would eliminate the less vigorous ones and raise the health level of the more fit who are employed. It would reduce a large proportion of the absences and increase the efficiency of all teachers.

The tendency toward setting up health requirements for certification and employment of teachers seems to be developing in school systems. A few of the schools in this Study require a health examination previous to employment. According to the physical examination blank for teachers in Cleveland,

[1] L. I. Dublin, *Physical Disability of New York City School Teachers.* (New York: Metropolitan Life Insurance Company, 1916) p. 20.
[2] Wood, *op. cit.*, p. 15.
[3] J. Y. Hart, *An Investigation of Sickness Data of Public Elementary School Teachers in London,* 1904-1919, Journal of the Royal Statistical Society, Vol. 85, Pt. 3 (New Series) May, 1922, p. 358.

Ohio, the examination "must be accepted by the Board of Education before the contract is effective." This blank indicates a complete survey of the health and living conditions of the individual. It includes a full inquiry into the conditions of work, home, habits, and family history. A complete physical examination is outlined and a record is made of the advice given by the physician to the teacher. Another interesting examination form is that used by the State of Connecticut for entrants to the state normal schools.

The schools in this Study requiring health examinations do not specify whether or not all remediable defects must be corrected before the teacher can be employed or how soon after employment corrections must be made. A few of the schools offer to teachers annual health examinations. The value of these examination facilities is in proportion to the use made of them by teachers and also to the number of defects corrected. It would have been helpful, if the schools offering but not requiring health examinations, had reported the number who had taken advantage of this opportunity. Where specific health qualifications are not required, teachers should be motivated in some way to use the health facilities provided for them. In the Report of the Cambridge Health Education Conference, practical suggestions were given for stimulating correction of defects among teachers.[1]

Hygienic Facilities

In the reports of the fifty-three schools making the health analysis, there is a wide range of provisions for safeguarding the health of teachers. In only a few of the reports is there evidence of a systematic, conscious, and conscientious effort to raise the health level among teachers. The method common to most is the provision of rest and lunch facilities. Many of the schools provide for rest rooms but only a few provide for rest time in the school. Rest time is as essential as a rest place. Only a few of the schools state that they arrange the teachers' programs so that they have time during the day free from classroom and other duties.

[1] *Report of the Cambridge Health Education Conference.* (New York: American Child Health Association, 1924) pp. 16-18.

For lunch, in most of the schools, teachers and students use the school cafeteria in common. A few schools provide the same food for both but in separate dining rooms. In one school, where an admirable use of the school cafeteria is made, the teachers act as heads of tables or hostesses for groups of students, serving them and entering into the fun and conversation of the group. This method operates to the advantage of both students and teachers. Unless there is a rotation among teachers in this responsibility, and a free period at some other time substituted for this service, it can easily become too great a burden for the majority of teachers. The problem of hall duty at lunch time in many cases is solved by the use of student discipline or student government.

None of the reports mention the proper ventilation and sanitation of the school plant as factors affecting the health of teachers, yet doubtless their influence on the teachers' health is as marked as it is on the health of the pupils.

Adjustment of Teacher's Load

In the report on the Health of Teachers in New York State, quoted above, out-of-school obligations or duties had fourth place among the offenders against the health of teachers, according to the opinion of supervisors.[1] Where extra school responsibilities are required of teachers, one of the schools in the Health Study satisfactorily provides for this by shortening the number of hours of teaching. Extra pay, which is reported by a few of the schools, does not necessarily offset the detrimental effect of overloading. The conscientious teacher may ungrudgingly assume responsibility for many of the extra school obligations, but the danger of the impairment of health and of efficiency still remains a problem to be solved. And where this problem of extra load is given due attention, the solution is usually found in lightening or adjusting the school program of overburdened teachers. This method, though not wholly desirable, is a practical means of bettering a crowded schedule condition. The desirable method of providing extra teachers for the extra load was reported by one school.

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[1] Wood, *op. cit.*, p. 18.

Social and Physical Activities

It is significant that a few of the schools are not leaving the physical and social activities merely to chance. The number of schools that are taking this advanced step, however, is still small. One school reports:

> A comfortably furnished and well equipped club house for teachers has been provided through the joint interest of the Department of Education and the local Teachers Association. This club house is at the disposal of the city teachers for parties, luncheons, wardrobe care, rest, etc.

In a few of the schools where some effort is made to further social activities, parties of various kinds are organized and reading clubs are initiated by the teachers themselves.

The physical activities which have so close a bearing on the teachers' buoyancy, vigor and efficiency, are just beginning to find a place on the list of school activities. The adjustment of the teachers' programs to the required extra school responsibilities, as reported in some cases under this heading, cannot rightly be interpreted as an adequate opportunity for play and exercise. A school which is making an effort in the right direction for a real provision for these activities for teachers reports:

> Faculty sports among men this year. In the new gymnasium building, space will be given for more faculty recreation. Between 4:30 and 6:30 each day some recreation is urgently recommended.

It is hoped that women teachers will receive like consideration. The problem among teachers is twofold: the provision of opportunity for activity and the stimulation of desire on their part to use the opportunity provided. The problem of motivation is closely correlated with opportunities for further training in health education.

Improvement of Living Conditions

The living conditions of teachers are apparently considered in some measure a school responsibility by about 75 per cent of the schools making the health analysis. The chief effort made in most cases is the provision of a list of available rooms or personal help in securing living quarters. It is not specified, however, whether or not the rooms listed must meet certain

standard or minimum requirements. Two or three of the schools are meeting the need of satisfactory living conditions by such means as adequate salaries or the provision of rooms or houses. This latter provision is not uncommon among private schools. An extension and adaptation of this provision may find its way increasingly into public schools. One school reports:

> The school has a minimum salary schedule based upon a general survey of our own local living conditions and expenses. The average financial requirement was adopted, taking into consideration moderate but comfortable living, travel, and advanced study.

Insurance and Retirement Fund As Health Safeguard

In one school the teachers' association is planning to organize group insurance for the teachers. Supposedly this will cover sickness and accident, though it is not stated specifically. None of the schools report any provision for funds for retiring teachers from active service. Some of the schools do have such provisions, and the absence of such a report apparently indicates that its relation to health is not understood. Insurance and retirement funds are important in the promotion of mental health through the removal of causes of worry.

In those systems where health insurance is in operation it should be possible for the teacher to take sufficient time for recuperation after an illness. It should be used to keep out of the classroom those teachers suffering from so called minor ailments, such as colds and other incapacitating physical conditions. This would very likely aid in reducing the high percentage of inefficient teachers which the supervisors in the New York State Study estimated as about 40 per cent. The teacher who is just "able to be around" should be required to withdraw from the classroom for recuperation without financial loss to herself. In all probability there is a subtle contagion of buoyancy and efficiency from vigorous teacher to pupil. If this is true, its corollary is also true, namely, the lassitude of minor ailments will tend toward a contagion of lassitude and indifference (if not of actual infection, as in the case of colds) among pupils. Health insurance could in large part prevent this happening and promote the radiation of positive health in the classroom.

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Effects of Supervision Upon Health

Although the effects of supervision upon the health of teachers are omitted in the reports from the schools, yet the subject seems of sufficient importance to introduce it for consideration by those who will make use of this Study. In the New York Report quoted above, a conspicuous percentage of the teachers expressed the opinion that the personality of the supervisor and the methods of supervision had a decided effect upon the health of teachers. Dr. Carrothers says: "In all probability there is a rather direct relation existing between the type of principal and the state of health possessed by teachers in a building. Especially in those cases where principals fall into one or the other of two rather positive types. When a principal understands the teachers, the problems and difficulties they must contend with, the strain under which they work, and when, in addition to the understanding, the principal makes a definite attempt to keep the school machinery well oiled, the teachers will usually be found living a more nearly normal physical, mental and social life."[1]

Further Training in Health Education

Further training in health education is necessary for teachers in service. This extended training should provide for the teacher's personal health needs and for the improvement of her health teaching. Teacher training institutes are making an effort to supply teachers with an adequate training in health but it is not yet an accomplished fact. If training in health education has been omitted in the preparation of teachers it is essential that the schools provide this for teachers in service. The means provided by the schools reporting on their health programs are talks on health subjects, reading (largely undirected), visiting days, teachers' institutes and professional courses. There is no specific statement as to the number of teachers who attended the talks or used the readings provided or enrolled for the courses. Nor is an opinion expressed as to their value in improving either the health of teachers or their health teaching. Any method or means used for further health

[1] George E. Carrothers, *The Physical Efficiency of Teachers.* pp. 28-30.

training of teachers enhances its value in proportion to its applicability to definite personal and professional needs of the teachers in a particular situation. These needs should be revealed by some method of investigation or inquiry and should determine approach, content, and method. Several workers in the field of health education have, from their experience, contributed valuable suggestions for worthwhile courses and aids for further health training of teachers.[1]

It is interesting to note that no mention is made in the school reports of obtaining from teacher training institutions, teachers who have been trained for health education. A demand for teachers with health education training will make normal schools, colleges and universities more eager to incorporate it in their curricula. And, in turn, when this preparation is adequately provided, the need of health training for teachers in service will be very much relieved.

Recommendations for Promoting Teachers' Health and Efficiency

The following recommendations for promoting the health and efficiency of teachers were compiled from three studies[2] relative to the health of teachers. They are also concurred in by the opinion of classroom teachers, specialists, and supervisors, as shown in the Cambridge Report.[3] It is of interest that the three studies mentioned, made at intervals during the past ten years, by different workers, with varying methods of research and with different groups of teachers, coincide substantially in their recommendations of methods for conserving the health of teachers. It is of equal interest that they concur in assuming the promotion of the teacher's health to be an obligation of the educational administration. It is a responsibility similar to that of the efficient industrial administrator for the workers in that field of service.

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[1] *Report of the Chicago Health Education Conference.* (New York: American Child Health Association, 1925), pp. 187-190.

[2] The studies referred to here are those made by Dr. Dublin, Dr. Wood, and Dr. Carrothers.

[3] *Report of the Cambridge Health Education Conference.* (New York: American Child Health Association, 1924), pp. 18-28.

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These recommendations are:

1. That conditions of schools include rest places and rest time for teachers, proper ventilation, cleanliness, adequate lunch facilities, etc.

2. That better facilities be provided for physical activities and recreation of teachers; that time be provided for activities of teachers and instruction and assistance be given them in forming hiking clubs, etc.

3. That definite efforts be made to find adequate living quarters for teachers.

4. That selective physical examination be given to all applicants before employment—this examination to be followed by instructions on how to keep well.

5. That probationary health periods be fixed for correction of remediable defects.

6. That provision be made by educational authorities for health supervision and guidance of teachers with periodic health examinations and advice concerning matters of personal health.

7. That adequate provision for retirement be put on a permanent basis that is fair to all and adjusted to a shorter term of service.

8. That salaries be based on a decent and adequate standard of living.

9. That health insurance and sick leave be provided and that teachers who are unfit for effective work be required to take sufficient time for recovery.

10. That records of teachers' absences be kept. That an annual analysis of the absences be made to determine the causes which impair the health of teachers. That a study based on this analysis be made to discover such new administrative measures as will control physical disabilities.

11. That every teacher in training be given a thorough physical examination upon entrance by a competent physician with a "health positive" attitude. That instruction and training be given in personal hygiene and health education.

12. That conditions of supervision be made consistent with the policy of health promotion among teachers.

13. That teachers in service have instruction in content and methods in health education. It is essential that this training be not merely a matter of providing reading lists for teachers but a definite program of instruction and training.

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An analytical study of some factors affecting the health and physical efficiency of public school teachers.

METROPOLITAN LIFE INSURANCE COMPANY. *The Teacher's Health—What Some Communities are Doing to Conserve It.* Monograph No. 4, School Health Bureau. New York, 1928, 32 pp. Free

Stresses the importance of the teacher's health, and gives from studies definite suggestions for conserving it.

NESBIT, O. B. *Sickness of the Gary Teachers,* 1928-29. (Mimeographed.) Director of Medical Inspection, Gary, Indiana.

A study of absences and the causes of absences of 571 teachers during a period of 200 school days. Illnesses and absences are grouped according to months and according to causes.

REPORT OF THE JOINT COMMITTEE ON HEALTH PROBLEMS IN EDUCATION OF THE NATIONAL EDUCATION ASSOCIATION AND THE AMERICAN MEDICAL ASSOCIATION. *Health Education—A Program for Public Schools and Teacher Training Institutions.* National Education Association, Washington, D. C., Revised 1930. 251 pp. 1.25

Reprint of Chapter I, "The Trend of Health," American Child Health Association, New York, 16 pp. .35

Discusses health conditions in the United States and the part which education plays in producing a healthy nation, as well as essential subject matter for the teacher and definite educational problems.

ROGERS, JAMES F. *The Health of the Teacher.* School Health Studies No. 12. Department of the Interior, Bureau of Education. Superintendent of Documents, Government Printing Office, Washington, D. C., 1926, 64 pp. .10

Presents statistics on absences of teachers due to sickness. The responsibility of the training school, the school officials, and of the teacher herself is discussed.

* See references suggested in footnote, pages 22 and 23.

Chapter IV

THE USE OF HYGIENIC FACILITIES

THERE are two possible uses of the school's hygienic facilities, neither of which conflicts with the other and both of which can contribute to the well-being of pupil and teacher. One may be called the immediate use, as it contributes to healthful living during the time that children and teachers are actually in the school. It is important to know what hygienic facilities are provided in schools which are consciously trying to surround their students with the most health-giving environment possible, and to what extent these facilities function for health-building for pupils and teachers. The other may be called the laboratory use, by which school equipment is used as laboratory and demonstration material, leading to a better understanding of health practices. In other words, the hygienic features of the school environment are drawn upon to provide those life situations which tend to make knowledge functional and help to build attitudes.

School Reports on Use of Hygienic Facilities in Producing a Healthful Environment

The Outline for a Study of Secondary School Health Programs included under Item VI, "The Hygiene of the School Plant," these two questions: "A. List such equipment of school buildings and grounds as in your opinion affects the health of the pupils. B. How do you use these facilities for education of pupils in health?"

Seven schools failed to answer either question. Others showed in their reports varying interpretations of the questions and widely different evaluations of their own facilities in terms of health. The following list of "equipment affecting the health of the pupils" is a compilation from the reports of the schools answering these questions. The number of schools re-

porting each item is not included as being of small significance in view of the variety of interpretations:

Athletic Equipment
- Gymnasium
- Showers
- Lockers and dressing rooms
- Athletic fields
- Playgrounds
- Swimming pool or river

School Building Equipment
- Ventilating equipment
- Heating equipment
- Lighting equipment
- Sanitary toilets
- Lavatories
- Drinking fountains

School Building Equipment (cont.)
- Paper towels
- Lunch room
- Domestic science equipment
- Rest room
- Vacuum cleaners
- Correct seats

Medical Equipment
- Medical inspection room
- First aid equipment
- Nurse's room
- Infirmary
- Dental chair

A great deal of work has been done in recent years to determine just what does constitute a healthful environment and the equipment which must be provided to insure it. The standards for school buildings and equipment have been so thoroughly developed that a detailed discussion of the specific value of the various facilities listed is unnecessary here.*

Athletic Equipment

It must be borne in mind that provision of equipment does not insure correct usage. No school should be satisfied with the mere possession of hygienic facilities.

A typical example of the slip between possession and use is in regard to the provision of showers. Athletic equipment ranks very high in the minds of the school people who answered these questionnaires and provision is made in most of the schools for the taking of showers after exercise. It is the experience of many schools, however, that high school girls especially, do not take showers under the conditions most commonly prevailing. The schools which have solved this difficulty have done so in two ways, first, by allowing a longer time for dressing, and, second, by giving to each teacher the responsibility of checking the taking of showers by the individual members of her class. The time should be sufficient for the girls to take

*For a list of standard medical and school nursing equipment, see *The Manual of Public Health Nursing*, (New York: Macmillan Co., 1926), pp. 118-123.

showers and dress without unduly slighting those details of face and costume which are so essential to the modern adolescent's morale and feeling of well-being. Requiring each teacher to check the taking of showers by her group, fixes responsibility and is more effective than making a vague, general rule which it is no one's business to enforce. A still better way, in that it saves the teacher's time for her more specific work and makes fuller educational use of hygienic facilities, has been worked out in one city. A matron who is carried on the teachers' pay roll, with a salary higher than that of janitor's assistant, has entire charge of the showers and dressing rooms with no other janitorial duties. The higher salary and freedom from other janitorial work make it possible to secure the type of woman who is interested in the pupils' health and well-being and capable of instructing the girls in matters relating to personal cleanliness and general hygiene.

School Building Equipment

Heating and Ventilating

This equipment is listed as important for health as often as athletic equipment and the same difficulties of usage are encountered.

The function of heating and ventilating equipment is to provide proper air conditions and the use of the equipment can only be measured by repeated checking on the air conditions attained, as compared with recognized standards of temperature, motion, and, less certainly, of humidity. This checking may be done by janitor, teacher, or students. The responsibility for seeing that it is done, in the most successful schools, is definitely delegated to the teacher or administrative officer directly in charge of the coordination of the school health program.

The advantage of having the checking done by the custodian is that it gives him a measure of the success of his machinery other than that of mechanical smoothness of operation, and may make him more tolerant of the attempts of individual teachers to improve conditions in their classrooms.

Checking by the students themselves has the inestimable advantage of giving them the opportunity to use their knowl-

edge of standards in real situations and of assuming the responsibility of determining and acting upon conditions involving their own welfare. This, obviously, is one of the most important objectives of health education. One school reports a School Health Board composed of students, the members of which are called Health Monitors. This board is responsible for the ventilation and temperature of the various classrooms.

Lighting

As with heating and ventilating, there is need for constant checking to insure proper usage of the facilities available. A large number of schools report provision of windows in sufficient number to meet the standards with regard to ratio of window area to floor area. The necessity for providing shades, and the standards for these, are either less well known or their importance as an aid to correct lighting is not recognized.

Some schools find it necessary to forbid any persons except the teachers or the custodians to touch the shades. Since lighting is a factor in the environment which, under modern conditions, is very greatly under the control of human beings, it is a pertinent question whether schools should not provide shades of a type which can be handled by pupils of high school maturity and then definitely train the pupils in the skills necessary to a safe and proper adjusting of shades, teaching them, as well, what constitutes satisfactory lighting.

Toilets

Perhaps the most satisfactory condition revealed by this survey was with regard to the provision of toilets and lavatories, sufficient in number and of good type.

Hand Washing Facilities

Running water (though seldom hot water), soap, and paper towels for hand washing are provided in almost every school. The reports do not state how the use of these facilities is encouraged or whether the number of students making use of them is known. A record of the number of students using such facilities would afford one excellent means of testing the

results of certain aspects of health teaching; and an analysis of the reasons why they are not used might in turn afford valuable teaching material.

Drinking Fountains

The provision of bubble fountains in the majority of the schools was another encouraging discovery. The poorest bubble fountain is undoubtedly far ahead of the common drinking cup of a decade ago. However, the types first put upon the market were not as satisfactory as their successors have been made and no school can be certain that its fountains are of the best type without repeated comparison wth newer standards. Sometimes older, less satisfactory types can be greatly improved at very little cost. Where this is not possible, more than the usual care needs to be given to teaching the children to use fountains properly. Almost none of the schools inspected had fountains of the approved types; none reported any special effort to teach children to use them correctly.

The placing of bubble fountains is a matter deserving of consideration but one on which few reports are made. In many schools they are in out-of-the-way corners and the children forget their existence. One school provides fountains in the hall near the cafeteria door so that children waiting in line to get into the cafeteria might have the stimulus to drink that the sight of the fountain and its convenience would furnish. Why not provide fountains in other places where children gather before and after school and during intermissions, such as near doorways and on the play fields?

Seating

The provision of comfortable seats of the right size and shape throughout the building is mentioned in a few reports as a contribution to a healthful environment. While the problem of adjusting size of chairs, desks, tables, and other equipment to rapidly growing children is perhaps not so great as in the elementary grades it is more complicated because the children move from room to room and do not possess individual equipment. And when high schools include the junior high school grades, they are again confronted with a rapid growth problem. In too many schools, even when adjustable seats are

provided, they are not adjusted from one year's end to another. The solution probably lies in the provision of equipment, especially seats, of varying sizes and adjusting these two or three times during the year, to individuals or to certain groups of individuals.

Hot Lunches

Just as the use of the common drinking cup has passed into the limbo of discarded practices, so too has passed the eating of a cold lunch from a paper bag in the cloak room or on the ball field. It is taken for granted to-day that the provision of a hot lunch and a lunchroom are the responsibility of the school. In most of the schools visited the school lunch was under the supervision of the home economics department, and high standards both as to choice of food and its preparation were maintained.

Obviously, the provision of well-chosen, well-cooked food does not insure that each student will eat a proper lunch. Schools have adopted various methods of meeting this particular problem. The most satisfactory, from the standpoint of immediate results, is the provision of a lunch which is served to each pupil, allowing no opportunity for making a wrong choice. This method is followed in many of the best private schools visited. A variation of this is the provision of a plate lunch, called a "football" lunch in one school, which a student may take if he so desires. Another method is to have a teacher stand at the head of the cafeteria line to inspect each tray and send back students with unsatisfactory lunches for other foods.

The lunchroom itself, with all its equipment, should conform to the highest hygienic standards. In the past, the problem of making place for a lunchroom in an old building often led to its location in the basement or in some dark and inconvenient room. It is obviously not conducive to health to crowd people together, and serve them with food, in places which are not accessible to sunshine and sometimes, partly because they are not well lighted, may not be scrupulously clean. Sunshine and cleanliness are two of our greatest safeguards of health. Many communities have set minimum standards (from

the viewpoint of health and safety) as to freedom from communicable disease of food handlers; sterilization of dishes, especially glasses, forks, and spoons; keeping of food on ice; and sanitary handling of food. The school lunchroom should, at the very least, meet such minimum standards. In addition, the room and its equipment should be such as to make cleaning easy; garbage should be quickly removed to covered cans; kitchen windows should be screened; milk, butter, and vegetables should be fresh and kept on ice until used; sterilization of dishes should be thorough.

The ventilation of the lunchroom is more difficult than in ordinary classrooms because of the large number of people using it at one time. Nevertheless, the standards for health are the same: freedom from dust, air in motion, temperature between 65 and 68 degrees Fahrenheit, and moderate humidity. Frequent checking of air conditions will be necessary if these standards are to be maintained.

One of the most valuable uses of the lunchroom—one which many schools are trying consciously to develop—is that of providing opportunity for girls and boys to meet and make social adjustments. The new spirit of education is changing classwork from a series of dull questions and answers to group enterprises in which each child has a part, in the doing of which such traits as cooperation, leadership, and initiative are developed. The significance for the mental and social health of the pupils of this change from autocracy to democracy is probably incalculable. The lunchroom is a place where boys and girls meet even more informally than in classrooms. The opportunity to teach them the social techniques known as "good manners" and give them the opportunity for making their own adjustments should not be lost. This necessitates the provision of an attractive lunchroom which invites one to linger, and time enough to eat slowly and enjoy the companionship of one's fellows. To clear the lunchroom every ten or twelve minutes is neither physically nor mentally healthful.

Medical Equipment

One school, out of the fifty-three whose answers were tabulated, mentions a "suite of four rooms," and one school, a

single room, for medical inspection purposes. Another school mentions a "medical dispensary," which may mean the same thing, and another a "dental dispensary." A "dental chair" is reported by one school. Three schools report a "nurse's room"; two, an "infirmary"; four, "rest rooms"; one, a "first aid room." Details regarding these rooms and their equipment were not given, and the extent to which the equipment is used for health building and for health teaching was for the most part left to inference. There is a wide possible latitude here, and no generalization on the data is possible. To take one example, practically all schools today have some kind of first aid equipment; but it is not stated in the reports whether this equipment is kept locked, to be used only by the nurse (who may have other duties and not be available at the time of an emergency); whether teachers have been instructed in first aid and have ready access to the first aid equipment; to what extent (if any) first aid treatments and the use of first aid equipment are a part of the pupil's training; nor whether first aid rendered to some pupil is used to demonstrate to other students lessons in health and safety. One school reports a Service Club of students which, under the supervision of the health counselor, takes care of minor ailments and temporary emergencies. Here they put at the service of their mates the training which they have gained in a course in home nursing and gain for themselves a mastery of knowledge and technique which no amount of conventional classwork could give them. This suggestion for the educational use of first aid equipment should be helpful to others.

Use of Hygienic Facilities as Laboratory and Demonstration Material

Educational Use of the Lunchroom

The use of the lunchroom in providing proper lunches is, of course, of great immediate value and undoubtedly contributes to the formation of proper food habits. In addition, the lunchroom, more than any other piece of equipment, has been made use of as a laboratory to aid knowledge and attitudes toward food in relation to health.

As might be expected, this is particularly true with regard to work in the home economics department itself. In some schools a certain amount of the actual preparation and serving of food is done by the students, but this use of the cafeteria cannot all be credited to health education as it is largely a matter of training in definite skills of vocational importance.

Several schools report class discussions as to the value of the school cafeteria; others report that attention is called to selection of lunches that meet the needs of the body. Such discussions are decidely enlivened by a study of the foods offered for sale in the cafeteria and, more important, of the foods actually chosen by students. Menus in a book, illustrating good and bad choices of food, cannot compare in interest with lunches chosen by schoolmates.

The results of such studies have invariably led to a consideration of the ways in which the choice of food can be improved.

Many schools work definitely for such improvement by arranging the foods which should be chosen where the students can most easily reach them and by using posters showing desirable combinations or illustrating the value of special foods such as milk. One school posts calorie content alongside the price of each food. We need studies on the relative values of such devices. One school has its candy counter in the farthest corner of the lunchroom so that the stimulus to candy buying is made as weak as possible. These attempts at improving food choices are all made by the teachers. In many cases they are only made during limited periods of the school year while a health campaign of one sort or another is being waged.

The reports on the uses of the lunchroom as demonstration material in teaching show a wide variation in usages and also that little emphasis is placed on the lunchroom as a laboratory —not in the sense of a place to acquire the skills of cooking and serving, but as a place to acquire first-hand knowledge of food-needs as compared with food-choices.

Making Choices

In general, the educational use made of the lunchroom, as well as of other hygienic facilities, has been primarily the

inculcation of habits on the basis of repetition of action where the responsibility for choice of actions-to-be-repeated rests with the teachers and administrative officers, not with the children themselves.

This undoubtedly has value and must not be neglected; but secondary education has also a different function to perform, that of giving students knowledge on which to base intelligent action, attitudes which will lead them to choose in their daily living intelligent rather than irrational modes of conduct, and actual experience in making their own choices.

Using Actual Problems from the Environment

The use of hygienic equipment as demonstration material is a step toward that form of education which presents the real thing, rather than a verbal description or a miniature model, and puts the problem discussed into a real setting. A real ventilating system has tremendous advantages over any model. The schools which send their students on tours of inspection to find how the heating and ventilating systems are operating, which discuss cleanliness with repeated reference to the showers and facilities for hand washing provided in the school building, which call attention to the bubble fountains and paper towels as aids in the prevention or spread of disease, are giving more adequate concepts of health problems, and the aids we have adopted toward their solution, than would be possible through any textbook presentation. Some of the schools have gone a step further and presented the real problems offered by the environment for solution by the students themselves, or with their aid. Such assistance as teachers, textbooks, or equipment can afford, have been placed at the students' immediate disposal. For example, children are weighed and measured in practically all of the more progressive schools. When a child weighs himself and then looks up the standards for his age and height,* comparing his gain during the last period with that between other weighings, he is automatically confronted with the problem of considering whether his gain is satisfactory or not. It becomes his problem, not the teacher's,

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

and his interest in the reasons for satisfactory or unsatisfactory gain will be correspondingly higher.

Attitudes of Community Responsibility

These attitudes are being fostered in some of the schools where responsibility is given to the student body, or its representatives. The responsibility of the School Health Board mentioned above, for the heating and ventilating of the various rooms could easily be made to extend to many other things of which students of high school age and maturity are as capable of taking charge as the more adult members of society. The Service Club, also mentioned in a previous paragraph, which takes charge of the mid-morning lunch, makes a definite and conscious contribution to the welfare of the school.

One very successful program made the students, through their student body officials and certain interested classes, partners with the faculty in a health survey of the school. The air conditions of the various rooms, the ratio of window area to floor area, the number, location, and type of fountains, and the number of toilets in relation to the school population were investigated and compared with standards; likewise the provision of soap, water, and paper towels; the foods offered for sale and the foods actually bought; and the number of students washing hands before lunch. The findings of the survey were given to the whole student body through the columns of the school paper. The survey was accompanied and followed by plans for improving health conditions, plans which the students assisted in making and carrying out. The result for the classes concerned was not only increased knowledge, and knowledge directly linked in the mind with real situations and with attitudes of community responsibility, but also the attitude and experience of facing facts, finding out their significance, and doing something about them—all of which is good mental hygiene.

Summary

While the answers to the question with regard to the use of hygienic equipment in education showed such a general lack

of understanding as to the meaning of the question that tabulation was impossible, the general information presented is interesting and suggestive. We obviously need more detailed reports as to how hygienic facilities are being used by those teachers who are keenly interested in making personal health and community health conscious and valued aims of their students.

The school environment offers problems which the student is easily made to see are his own; their solution offers wide opportunity for the adolescent's desire for running his own affairs. Student government and extracurricular activities of all kinds, when properly guided, are proving of inestimable worth to students and to the school. If our health education is to function, now or in later life, we should be able to give pupils knowledge and criteria for evaluating standards and then we should turn over to them a large part of the study of the school environment and the planning for its improvement. As a means of teaching health, life situations are invaluable; as a means of testing health education, real problems are definitely superior to imaginary ones; as a means of bettering actual conditions, adolescent enthusiasm has a powerful influence on the powers which financially control schools.

Teacher Training

There are two suggestions for teacher training which arise out of this consideration of the use of hygienic facilities. One is the necessity for acquainting the prospective teacher with standards for school buildings and equipment and for giving her practice in applying these in real situations. Part of her job as a teacher will be the participation in the planning of new buildings and modifying old ones. She must therefore be prepared for this part of her work just as surely as for the making of lesson plans.

The second suggestion is that she must be made dissatisfied with textbook memorization, either as a device for, or a test of, health education. She must learn how to use the actual situations which the environment presents. The health problems in the environment are the very problems which will confront her students when she begins her teaching. For them, as for her,

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the best way to learn how to solve them is to practice solving them, in the secondary school this should be done by the students, in the normal school by the student teachers.

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Chapter V

BASIC, SPECIFIC AND CONTRIBUTORY SUBJECT MATTER

IN THIS section of the report we refer to the development by boys and girls of healthful behavior, together with such desirable attitudes and practical knowledge regarding himself and his world as will ensure the child's successful adjustment to his complete environment,—home, community, family, fellows.

In the elementary school, emphasis has been laid upon securing certain behavior reactions, without troubling much with any "whys" and "hows," i.e., drink milk; play outdoors with big muscle activities; sleep nine hours; get vaccinated or immunized; have a physical examination; and so on. In those early years, we adults tend to control the child's environment; he does not need reasons for choices which he is given no opportunity to make. With increased freedom, he acquires increased responsibility for making wise or foolish choices. The natural and social sciences in high school have, as one function, that of giving reasons, of explaining the "hows" and "whys" of life to girls and boys, in such clear and convincing and concrete terms as to give them the basis for the wise choice we want them to make in the serious business of caring for themselves, for their own sakes and their communities' best service.

The subject matter fields relating to health have been considered as falling into three groups: Basic subjects, specific health instruction, and contributory subjects. The distinction is purely arbitrary and is made simply for convenience. By "basic subjects," we mean those contributing to the knowledge, understanding, and grasp of principle in relation to those activities which are taught in the specific health subjects. By "specific health instruction," we mean courses in hygiene, closely applied to healthful living; courses in dietetics, closely

applied to feeding self or family, with little or no theory; courses in first aid, home nursing, and parts, at least, of the subject matter of child care and training courses. By "contributory subjects," we mean those which contribute to the well-being of boys and girls by expression of health ideals or by provision of constructive outlets for youthful aspirations, even though the major purpose of the subjects is not health instruction. Home economics, therefore, includes a good deal of specific health instruction and a still greater amount of contributory health instruction, according to the above classification.

With this explanation of the classification, the following brief summary of the courses reported* as contributing to health instruction, will be of interest.

ALLOCATION OF HEALTH TRAINING AND INSTRUCTION TO COURSES IN PURE OR APPLIED SCIENCE

	Considered Basic	Considered Specific	Considered Contributory	Required	Elective
Home Economics	30	..	..	18	..
General Science	25	..	..	11	13
Biology	25	10	8	..	18
Chemistry	22	..	..	10	11
Physics	15	..	..	..	..
Social Science	12	..	5	19	..
Hygiene	12	23	..	24	..

(No tally was kept of subjects mentioned less than ten times.)

RESULTS OF HEALTH TRAINING AND INSTRUCTION THROUGH COURSES IN PURE AND APPLIED SCIENCE

The analysis of the reports submitted led to the following list, compiled from the suggestions of about fifty schools embracing what could probably be considered "results."

Through Biology

1. Interest in out-of-door school nature activities.
2. Interest in life process.

*Physical Education was reported separately and is taken up in another chapter (p. 90).

3. Sound point of view on sex problems.
4. Interest in personal and public health.
5. Health habits.
6. More intelligent regulation of diet.

Through Chemistry

1. Better selection and care of food.
2. Knowledge of coal gas dangers.
3. Knowledge of treatment of burns.
4. Knowledge of acids and neutralization of.
5. Stopping of smoking among pupils as result of a cigarette experiment.
6. More intelligent grasp of health subjects, hence a happier mental attitude and a clearer vision of civic health problems.

Through Social Sciences

1. Better understanding of causes and results of disease in the community.
2. Revision of family budgets.
3. Starting of savings accounts.

Through Home Economics

1. Sane attitude toward clothing and food.
2. Better selection of food.
3. Cleanliness.
4. Better care of home.
5. Self-control.
6. Self-respect.
7. Interest in results of health habits.
8. Interest in community and national health.

Through General Policy of School (No definite courses stated)

1. Interest and definite improvement in family's health habits and condition of health.
2. Correction of defects.
3. Learning to eat better foods.
   Meal planning.
   Conducting, by high school girls, of a nutrition class for little children.

4. Improvement in type of clothing worn.
   Improvement in personal appearance.
5. Care of children in their homes.
6. Interest in community health, good citizenship and relationship between personal and community health.
7. General physical fitness.
8. Development of normal social relations.
   Mental health.
   Improvement in character.

The extraordinary inclusiveness of the list is its outstanding feature, reflecting, as it probably does, the wide sweep of the present-day elective high school course, as well as the lack of standards for health education.

An important piece of investigation cries out to be done here, in the analysis of the aim, the content, and the method of specific health courses; the selection of the vital elements and their synthesis into a minimum standard course, or courses, with designation of the necessary prerequisite and follow-up basic sciences. The collection of data for such a project, however, was entirely outside the field of this inquiry.

Quotations from the Self-Studies Illustrating Health Contributions of the Basic Subjects

1. Natural Sciences

Biology and General Science

The results which we are definitely achieving in our biology course may be summarized as follows:

a. We are creating a definite interest in personal and public health, as evidenced by the after-reactions of the boys and girls toward situations involving the use of the knowledge previously acquired, and by the interest displayed by pupils wanting further material on various topics.

b. We are giving fundamental instruction in the structure, function, operating and care of the various organs of the body which is necessary to the highest living of the individual. That this instruction is functioning in the formation of definite and specific health habits is attested by the close check-up on all health habits by our Physical Education Department.

c. We are providing wholesome instruction in sex problems, both as they are related to the subjects of eugenics and euthenics. Our sex

instruction is carried on in a mixed group and has always resulted in wholesome and fearless discussion. We are confident that very sound points of view on this subject have been established by the instruction as shown by the intelligent discussion of the facts in classes and in groups where the boys and girls are separated.

d. We are establishing lasting interests in out-of-school nature activities such as birds, trees, flowers, etc. This has a very distinct health connection, as it provides wholesome and instructive recreation for the pupil.

e. We are establishing an intelligent point of view in regard to matters of public health.

And from another school:

An understanding of the causes of many of our diseases, how they are communicated, and how they may be controlled, and the further knowledge that most bacteria are helpful rather than harmful. Checked by interest in subject and by the care taken to check spread of germs.

Chemistry

Composition of certain cosmetics. Soap as a substitute for cosmetics.
Composition of some common home remedies.
Powerful coal tar derivatives as medicine and their dangers.
Adulteration of foods; preservation of foods with dangerous chemicals; pasteurization, sterilization, and refrigeration of foods.
Ventilation of home and other buildings.
Water purification. Sewage disposal.
Cooperation in civic health improvements.

Another school reports:

Understanding and appreciation of oxygen and its relation to health; dangers of coal tar products as preservatives of food.
Treatment of burns.
Acids and their neutralization.

Physics

One teacher reports on the health lessons in physics for this term:

Effect of too much or too little light on the eyes.
Health temperature and use of thermometer. Humidity of air best for us. Relative humidity and its regulation in our building.

2. Social Studies

In connection with the historical and geographical aspects of the social studies, the health contributions as reported are not particularly significant. Those which are made are in the nature of appreciations and ideals. Little basic subject matter

is included here, in the sense of grasp of principles involved in health practices.

History

One teacher states that,

> Correct posture in sitting, standing and walking is stressed here as in all other classes.

One teacher mentions health attitudes resulting from the study of ancient and medieval history as follows:

> The danger to the individual and to the nation from a life of extravagance and luxury. Fall of Rome. France under Louis XIV.
>
> Friendliness toward foreigners. Uselessness of most wars—Thirty Years' War; Spanish Succession.
>
> Other topics through which health lessons are taught are a study of the life of the early Greeks and Romans; athletics; health conditions of the Middle Ages in contrast with those of today.

It is rather surprising that for American history, a required subject for all seniors, and one in which of course many health correlations are possible, no report was made.

Community Civics

In connection with courses in civics, social problems and economics, there appears a large amount of material designed to inculcate the idea of the duty of the citizen to understand his obligations. A real contribution is being made here in the study of community health organization for better food, water, and communicable disease control.

A few specific or correlated health lessons reported upon by social science teachers (not arranged in order of presentation) are these:

> Need of simple diet and sufficient sleep in doing good work.
>
> Strength of body and development of character and talents as a preparation for personal service in the world.
>
> Personal health as a means of increasing one's enjoyment of life.
>
> Necessity of pure water and pure food as community matters. Pure food laws. Garbage disposal. Sewage.
>
> The home's dependence upon healthful physical conditions.
>
> City and State health departments: function of; necessity for. State vaccination, physical training and medical inspection laws.
>
> Water supply; food inspection; care of public places.
>
> Prevention of disease. Traffic laws to safeguard life.

State and national aids to health and safety. Personal responsibility.

Liquor and drug evils. Government regulations and respect for law.

Study of vocations. Value of health in performing tasks efficiently.

A citizen's relation to his community; cooperation; community spirit; health aspects of foreign relations; immigration; Americanization.

Safety in labor and in amusements.

The government's part in making the individual safe at work or play.

A citizen's duty to obey not only the health laws made by men but, in his personal life, to obey Nature's laws.

3. Mathematics

The following instruction in arithmetic and mathematics comes under the head of basic rather than contributory instruction, although mathematics had not been regarded, in the making of the outline, as a basic subject for health instruction. When we consider, however, the great use made in all public health literature of the mathematical treatment of data, the use in personal health studies of weight* tables and graphs, and the emphasis now given to budgeting, it is clear that mathematics can make an essential contribution to basic health material. The grasp of principles and basic data in the health field, sought through science and social studies, will be weak and ineffectual unless mathematics makes this contribution. The ability to read tables of figures, and to see reports of disease-prevalence over time and space as graphs and spot-maps, is undoubtedly essential to sound health education at the secondary school level. It has been largely ignored, even by professional health educators themselves. The following quotations indicate that a beginning has been made in giving this basic instruction, and in using it for specific health instruction, in secondary schools:

The pupils are taught how to keep a budget of living expenses, entering therein the actual sums spent, including money spent on them by their parents. For instance, under the item of "health", is entered the amount spent on dental work; and the lesson is taught that one must provide not only for daily needs, but must also anticipate future wants. "Recreation" is another item on the budget.

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

Circular graphs, allotment of sleep and right foods, weight* graphs are made.

4. Home Economics

The results given by the schools as achieved through this subject lead to the conclusion that home economics is misplaced in the Study Schedule as a basic subject, but should rather be regarded as a vehicle for contributory health instruction. The results reported are almost wholly in practical and immediate action, rather than in grasp of fundamental principles and basic facts. The following reports are typical:

Results in Home Economics

a. Better meals selected in lunchroom. Home economics teacher observes trays.
b. Ability to plan menus—checked by assigned work.
c. Better selection and appreciation of food in the home—checked by conferences with parents and by individual reports.
d. Knowledge of food values—checked by tests and posters.

We aim to check up the health work of the physical education department at as many points as possible. We retest the lung capacity, eyes, teeth and feet of each pupil in the group. After having determined the calories required for each pupil, we definitely check all the diets for a period of three weeks to determine whether each pupil in the group is receiving proper nourishment; if he is not, we go a step further and determine the type of food in which a lack or an excess exists—whether protein, fats, or carbohydrates. Through the study of foods, there has been a noticeable difference in the amount of fresh vegetables and milk chosen for lunch and a marked gain in weight and appearance. Sensible and comfortable shoes, appropriate school dress and habits of personal cleanliness are some definite results of the study of clothing.

Results in Hygiene and Sanitation

a. Keeping of health charts and notebooks.
b. Reports of leaders of posture squad, on posture maintained in sitting, standing and walking.

Results from Specific Health Instruction

The results of specific health instruction on which checks are reported are prinicipally in the following fields:

Personal appearance (cleanliness—hair, nails, etc.).

Correction of defects (especially of teeth and vision).

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

Improvement in nutrition as shown by lessening of percentage of underweight* and overweight.
Health habits (choice of food, posture).
First aid.
Social etiquette.
Less lassitude—keener desire for work.
Neatness of building and grounds—improved care.

We have no data on health problems of the secondary school comparable to the extensive records of medical inspections of elementary school children. It is impossible, therefore, to judge how nearly the specific instruction given meets the health needs of students. The emphasis given to the correction of dental and vision defects in secondary schools indicates that this work has not been accomplished in the elementary school as might reasonably have been expected. The outstanding omission in specific health instruction is the lack of any teaching as to communicable disease control. While "children's diseases" are not a large factor in the high school health problem, the common cold and other respiratory infections are very serious problems, both as to morbidity and mortality in these age-groups.

The emphasis on personal appearance, including care of hair and nails, social etiquette, etc., indicates a wise appreciation of the importance of the social adjustment of the adolescent, and of the value of attention to care of the person in building his morale.

Results of Health Training and Instruction Through Nonscientific Contributory Courses

Of the nonscientific courses, those most frequently mentioned are English in its various aspects, art, manual training, and music. Due to the vagueness of the reporting, it is not possible to show just what is being accomplished in each case.

English

In the reports on the work in English the greatest contribution to health teaching is considered by the schools themselves to be the building of ideals:

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

At the beginning of each term we work out in English our conception of an ideal man—physically, mentally, morally, emotionally. Characters met in books are measured according to the ideal standard.

Book reports of biographies (as of Roosevelt, Scott, Stevenson) yield lessons on the conquest of physical disability as shown in the lives of these men. Ideas of the family are developed. All of this serves a definite mental hygiene purpose.

A further contribution is through "vocational projects," in which the relation of health to success in life (such as the importance of posture in getting and holding a position) is considered. Altruistic conceptions of vocational opportunities are also stressed as a mental hygiene factor.

Historical novels contribute by contrast to a better understanding of the blessings of modern sanitation and living conditions as in the "comparison of living conditions in Ivanhoe with the luxuries of today."

Another line of English work contributory to health teaching is the school paper which, one report states:

Has become an important factor in our health program. Each month a prize of one dollar is offered for the best slogan on some special health problem. This idea originated in an attempt to keep our halls neat. After that, a definite subject pertaining to health, such as eyes, better posture, etc., was chosen for each issue. Also, an occasional health issue of the paper was edited.

Art

The art contributions listed are concerned with posters and exhibits on health matters. Familiar health rules are used as a basis of health-poster competitions. One school reports attention to the specific health habits of care of the eyes and posture during the drawing period. Mental hygiene contributions are made through

Teaching children not to be discouraged when their first attempts appear crude; not using another's design as their own; encouraging a feeling of pride in the condition of the room.

Manual Training, Shop work, Printing

The contributions here are toward securing hygienic practices by the students in the shop, and toward more or less definite mental health factors, such as self-respect, satisfaction in good workmanship, pride in the home. One school reports:

The part the general shop plays in the health program is of an indirect, practical nature:

Correct working posture.
Bench and machine placements for best artificial and natural lighting.
Well ventilated shop.
Safety devices.

Another school mentions

Proper lighting, ventilation, posture and temperature as conditions for marking.

A third teaches that:

Clean hands are necessary for high grade work.
Clean teeth necessary to health which is vital in work.
Even small cuts may become infected and lead to serious handicaps.

These reports show a general appreciation of the overhead responsibility which all teachers of any subject whatever must carry for the maintenance and further development of habits of personal hygiene. They also show a general recognition of a similar responsibility for forming ideals and standards of conduct. These are recognized as definitely contributory to the well-being of pupils. No sharp line is drawn in the minds of these teachers between the goals of health, citizenship, ethical character and worthy home membership. All are recognized in "the realization of the highest physical, mental and spiritual possibilities of the individual."

Checks Upon These Results

The Outline for the Study of the School Health Program contained as one of its items the question: "What results do you achieve through each course? How do you check up on these results?"

In the replies a considerable number of checks were listed, some much more valuable than others in demonstrating that desired results have been attained. They may be classified as objective and subjective checks.

Objective Checks (Definite standards, the teacher's judgment entering comparatively little into the rating).

Essential

Health record cards or charts (reliability should be carefully considered)

Health habits formed (determined by observation)
Health examinations
Physical re-examinations
Correction of defects
Weight* for height and age
Posture photographs
Observation of lunches chosen at cafeteria
Red Cross certificates for first aid

Possibly, But Not Certainly, Important

Home project work
Personal appearance

Nonessential

Written tests for knowledge
Theses
Stories
Posters
Scrapbooks
Notebooks

Subjective Checks (No definite standards exist. The check used is the teacher's judgment on the point in question.)

General attitude
Effort
Improvement
Class discussions and questionnaire
Less lassitude
Talks with children and with parents

The essential objective checks, it will be noted, are not of subject matter, but rather of the student's person and habits. The nonessential objective checks relate to subject matter and can be very helpful to both pupil and teacher, if developed with skill. The subjective checks may be of the greatest value of all if the teacher's judgment is fair and her standards high and unflinching.

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

The suggestion for high schools arising out of this collection of data is the development of a score card, or check sheet, bearing such of the above items as the teachers think wise, to be scored according to their judgments.

Quotations from the Self-Studies Illustrating the Use of These Checks

One school describes a few outstanding types of checks in connection with its specific health courses:

A study of the records of the girls' physical examinations shows an improvement in personal health habits by those having taken the hygiene courses.

An improvement in the appearance of the girls in these courses is indicative of achievement in the course.

Conversation with teachers in other departments discloses the fact that information given in the hygiene class is contributed as a part of the discussion in connection with other subjects.

Comparison of this group with regard to posture, condition of teeth, etc., with groups who have not had this course shows desirable results for the former.

An improvement in sportsmanship, honesty, etc., on the athletic field indicates a functioning of the moral standards discussed in this class.

From other schools come these statements:

The writer has inspected contents of trays of boy pupils for one entire term. The conclusion is that very few are benefited by the instruction received in class. The responsibility should rest on the seller of the food. There is too much temptation for the boy. Balanced diets should be provided and very little choice should be left to the individual boy.

Hygiene Records

A girl must have remediable defects cleared from her record card, in order to be placed by the school. Very few placements are held up on this account, as each girl is called to have her health record inspected by the physical training department as she enters her last contract.

Hygiene Medals

Awarded to the fifteen girls who have maintained "Excellent" in hygiene for the longest period of time. (A girl may lose her "E", for a poor condition of hair or nails.) With each succeeding year, these "Excellent" records have increased in duration.

First Aid; Behavior in Emergencies

When a student was suffering from an epileptic fit, a fellow student was the first one to take precautions to prevent her from biting her tongue.

When a girl comes to the office, she frequently requests for her particular mishap a certain treatment suggested in the health talks.

Our quarterly report cards note the progress of the student not only in the strictly academic subjects, but in good health habits that are

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requisite for the highest physical efficiency and in the social virtues that are necessary for good citizenship.

Regular yearly examinations are given of the teeth, vision, and personal appearance. Pupils cannot get credit for hygiene unless remediable defects are corrected. We provide pupils with lists of the best general and special clinics where treatment can be obtained. We have had special arrangement with an excellent dental clinic, so that dental prophylaxis could be given to all pupils who desired it. We have a similar arrangement with an excellent eye clinic and we send pupils to it, in case they desire a clinic, for a complete examination of vision. We cooperate with private physicians in medical work for the boys and we follow boys along who need special attention. The hygiene department was organized in October, 1917, and there has been since then a gradual improvement in personal appearance of the boys and of the building. The boys appear cleaner, take more pride in their personal appearance and are eager to get advice and help in matters of personal hygiene. Teachers who have been in the school for several years testify to the improvement in the sanitation of the building since the department of hygiene has been operating. The department has the support of the principal and no boy can get a diploma unless he has met the tests set by the hygiene department. The tests comprise those of physical condition mentioned, and also regular uniform written tests for knowledge of subject matter.

Improvement in social etiquette and in planning—checked through food posters, menus and notebooks. Continued improvement in personal appearance and hygiene—checked through monthly weight* cards, talks with children and parents, posters, charts, notebooks, etc.

Better knowledge of, and more active interest taken by pupil in, himself and community. Greater stimulation and alertness toward problems of the home and city as shown by home project work. Bringing to class for discussion and suggesting improvements for home problems discovered by pupils. Daily inspection for cleanliness, good posture, care of teeth, etc. Progress shown in getting more perfect physical condition, and in better sitting and standing positions gained. Greater pride in personal appearance, shown in greater cleanliness of pupils, neatness of dress and general attitude. Health chart reports on weight* show improvement. In one class, number of underweight children decreased from 38 per cent to 14 per cent. Greater activity in classes—less lassitude—keen desire for work. Steady growth in habits, forming the foundation for good character.

Results Show in Statistics and in Attitudes

The method used as a check on work done (by sanitation squads) is a report of each group, specifying fields of survey, number of cans destroyed, number of pools drained, corrections of footwear and other clothing, number of homes put on inspection list, number of parents who assist by cleaning up premises, number destroying or treating manure piles and cleaning stables, number who submit water samples, and all other responses to activities initiated for them. The sentiment and attitude of the public in respect to county nurse, county health officer, local health officer, assistance in time of epidemics and their control, are evidences of the results of health teaching. The school has passed through two such epidemics

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

(measles and whooping cough) within the present school term and the better care of the sick and measures to check the spread of these diseases resulted from the educative measures propagated by the school children.

Results Show in Checks

Health examinations and evidences of physical fitness.
Tests of knowledge acquired.
Evidences of habits formed.
Evidences of right attitudes—health ideals—appreciation of health from standpoint of happiness, efficiency and service.
Normal social relationships.
Mental health.
Good citizenship.

Comparative Statistics

Generally improved health. Many statistics.
No standard for checking. Really checked by comparative statistics, this year and preceding year.

Administration of the Program and Preparation of Teachers

From all of this it will be seen at once that a high school health program cannot be achieved by one person, acting singly. Whose is the responsibility?

Upon the principal must be laid the fundamental responsibility of recognizing the first claim of health, and of providing and maintaining an efficiently functioning machine in the school, to secure the health aims of the school. This responsibility holds, whether the principal be considered general supervisor of instruction, or the general developer and coordinator of the policies of the school.

Even if a specialist in health education is provided in the system or school, or a number of specialists, the principal's duty as above outlined cannot be delegated though the detailed working out of it can. The schools which studied themselves showed a wide range of specialists, besides the principal.

Fifty-three reports were studied to discover the fields from which the directors of these programs were drawn. Some were too indefinite for tabulation. The remainder group themselves as follows:

Physical Education 11
General Education .....10 (4 are chairmen of technical committees)

Nursing	6
Home Economics	2
Biology	1
Medicine	1

While this grouping may be accidental, it suggests several likely assumptions: First, leadership appears to depend upon a power to integrate contributions from various departments in the interests of a child and not upon any special technical training, as that of a physical educator, nurse, physician, home economist. Second, the general educator of vision and experience is beginning to take the leadership in integrating the activities of his specialists. Third, physical educators, traditionally the health custodians of the schools, are being appointed to direct our health education, this being considered a logical development of "physical education." The results of this last tendency require careful checking, to discover the effectiveness of the policy.

It is interesting to note how very rare health education leadership appears to be among biology and home economics teachers in these schools. This may be desirable, yet failure to appreciate the primary importance to successful living of the knowledge and skills incident to the care and nourishing of the body, probably explains some of the failures of health education courses in the high school health field.

When we come to examine the preparation of the teachers themselves for specific health instruction, we find very similar results. A considerable number of schools gave no answers or indefinite ones. In eighteen schools, specific health instruction is assigned to people trained in physical education; in eight schools, to nurses; in six schools, to people trained in "science" ("science" meaning some phase of biology); in six, to "general" educators; in four, to people trained in home economics; in three, to physicians. The term "Instructor in Health," "Health Educator," or "Health Counselor" has no definite training implication since the training as actually given includes nursing education, physical education, home economics, medicine, and even brief special courses in hygiene and public health. The range of preparation is extremely wide, extending from a uni-

versity degree in health education (doctor's or master's), or an M.D. degree, to brief nutrition courses, with every conceivable modification between these extremes. Similarly, teachers' experience ranges from twenty-five years to two; in quality it covers a range of university lecturing, high school health teaching, successful health counseling, scout leadership, tuberculosis work, camp directing, U. S. Public Health Service work, playground directing, private nursing and pediatric medical practice.

The data given above are scanty, and they have not been scientifically checked; they should not, therefore, be taken too seriously. They point, however, to deep interest, plus a chaotic conception as to what should be taught, and when and by whom, which can be reduced to an effective basis for teacher selection only by such an analysis of children's health needs as is suggested later in this chapter, where suggestions for improvement of health programs are under consideration. When such an analysis is made, the training program of the ideal health counselor will stand forth. Moreover, when considered in relation to this program, the special contributions to health education of the basic and specific subjects, as well as some of the contributory subjects, will also become more apparent.

Significance of the Present Study for Reorganization of Science Teaching

This analysis brings out the critical importance of the natural sciences in basic health instruction. It raises the questions: Have the science teachers themselves recognized this importance? Are they willing to set these possible services as their goals, even to the point of modifying the traditional method and subject matter of high school science instruction? Our suggestions as to these modifications are in the main in accord with the viewpoint of the Committee on "Reorganization of Science in Secondary Schools[1]," in whose report the objectives of biology are stated thus:

"Since much of biology deals directly with problems of

[1] A Report of the Commission on the Reorganization of Secondary Education, appointed by the National Education Association. Reorganization of Science in Secondary Schools, pp. 12-15, 22.

health, the course in biology must accept efficient health instruction as one of its chief and specific ends. * * * Every pupil, however, whether in the country or the city, should be given such instruction in the knowledge and care of his body that there will be an improvement in the health conditions and general efficiency of the community."

The objectives of science education in secondary schools are stated thus:

"*Health:* It is important that those who are ill may be cured, but it is much more important that people be so taught that they may not become ill. The control and elimination of disease, the provision of adequate hospital facilities and medical inspection, the maintenance of the public health, all necessitate widely disseminated knowledge and practice of the basic principles of personal hygiene and public sanitation. It is the duty of the secondary schools to provide such instruction for all pupils. This purpose finds realization chiefly through science and civics. Therefore, health topics should be included in the science taught in the junior high school, and in at least the first two years of the four-year high school.

Worthy Home Membership: Science touches the efficiency of the home and of life within the home at every angle. General science, biology, physiology, physics, chemistry, all have definite services to render toward the proper organization, use and support of home life. A great vitalizing force for science instruction can be found in the relation of these courses to intelligent home making, management and enjoyment. It is a serious criticism of science teaching in the past that these fundamental relationships have been so largely overlooked. These relationships apply not only to those who have the care of the home and of the children within it, but also to such other members of the family as may be called upon to make repairs to the heating and ventilating system, to adjust the electrical appliances, or to perform any of the many services that make for an effective home.

Citizenship: The members of a democratic society need a far greater appreciation of the part which scientifically trained

men and women should perform in advancing the welfare of society. Science teaching should therefore be especially valuable in the field of citizenship, because of the increased respect which the citizen should obtain for the expert, and should increase his ability to select experts wisely for positions requiring expert knowledge. At the same time, it should afford the basis for an intelligent evaluation of the services rendered by such experts."

Further quotation from this valuable report brings out the conviction that it is devolving "more and more upon the school to supply the opportunities for actual contact with materials that have real significance in the life of man, contacts that result in keen interests, appreciation, and power. To be of the maximum effect the experiences should be markedly different from those that are vicariously furnished by books, diagrams, and symbolic materials, such as make up the content of many subjects of study. * * * Indeed, the kind of science teaching for which this whole report argues cannot be developed except through constant use of the manifestations of science in the work in which men and women are regularly engaged. It will appear later in the outlines of courses that science in secondary schools finds its proper basis in personal, home, and community life and needs."

From these and a host of similar statements which might be brought together from authoritive sources, it appears that the leaders among science teachers have already definitely recognized their function in relation to health education, and have a partial conception of what is necessary in order to fulfill that function. Even a casual survey of texts in elementary science will show a considerable inclusion of subject matter basic to health education. The actual teaching lags somewhat behind the ideals of the Committee report and of texts, partly because such teaching to be effective must have the quality of close application to life, and the traditional school organization makes that always difficult and frequently impossible of attainment. Another very important factor is in the training of science teachers, which has been defective in scope and in humanistic qualities, as well as in scholarship. The teacher who is too dependent on a textbook-laboratory manual-syllabus combination can-

not move freely enough to achieve vital health education results through his subject. Finally, there has been no significant analysis of the basic problem of health education subject matter desirable at the secondary level; nor has there been any careful experimental attack on the psychology involved in the process of teaching this material so as to change attitudes and conduct.

Suggestions Concerning Improvement

As one ponders even the best of these programs, it becomes apparent that much improvement could be made through a more systematic study of the health needs of boys and girls of secondary school age. Analysis of these needs should lead to providing facilities to meet them. Three steps should be taken:

1. Data should be collected from every community, giving more complete knowledge than anyone now has, as to health needs of adolescents. Such data might be gained by a study of:

   a. Conditions revealed through analysis of health examination records of the boys and girls in the school.
   b. Their athletic records.
   c. Their home practices.
   d. Their social habits.
   e. Their occupational interests.

Social economic data are necessary for the interpretation of these studies.

2. The facts and conditions revealed by the foregoing survey should be organized in categories, to show in general terms:

   a. The physical defects in function or structure, which should be corrected or ameliorated, in high school boys and girls.
   b. The defects in habit or attitude,—it may be both,—which require correction in the boys and girls.
   c. The range of related information which should be provided for the students, to enable them to meet their health needs wisely as their environment changes and their freedom increases.

3. Reorganization of the school to care for the above revealed health needs is the crucial third step. Without it, the health effort of the school must remain uncoordinated, and its good results must be accidental. Such organization implies:

a. A thorough health examination of every adolescent who enters the school. (See chapter on health examinations for details.) Along with this examination, there must be adequate follow-up, accompanied by recording of progress in correction or amelioration of the defects revealed. The details of this correction will be determined by the local conditions.

b. A sympathetic school and home follow-up to reconstruct the personal health habits and the wholesome attitudes toward one's self in work and play, so essential to health. Elsewhere in this pamphlet, the function of the health counselor is described in detail.* Through her, the best results in this field will probably be achieved, though in the absence of such a person, the teacher of hygiene, or biology, or physical education, or home economics can do the work. It is a very personal service and requires a personal handling.

c. The distribution of the "Knowledge-Behavior-Attitude" material throughout the courses offered in the school, placing each segment of knowledge in the "subject" where it logically belongs. Such a placement will recognize, for example, that while the facts about digestion and assimiliation belong in physiology or biology; that while skills in care and preparation of foods, as well as attitudes toward eating things not fancied, are the province of home economics; that while certain fine flowers of the spirit as helpfulness or cooperation in the family, may be developed through either social civics studies or literary appreciations; that while opportunity to practice food choice may be afforded by the school cafeteria; that while the advertising of good foods is the field of the fine arts department,—nevertheless good teaching will provide for the acquisition of skills or

*See pp. 16-21.

knowledge in the department of the specialist best fitted to give it, and permitting of the least degree of overlapping possible. An analysis should be made for each item disclosed: Where do the facts belong? In what science course? Civics course? History? Where are the skills taught? Physical education? Home economics? Music, etc.? Where can the attitudes be reinforced? In English? Psychology? Social economics?

On this layout should be built up the scientific health courses; the basic science courses; and the contributory courses.

Next, it is necessary to see that every child—boy and girl—shall get the irreducible minimum of instruction to ensure both acceptable behavior and sound information covering the points on which decisions have to be made that may affect well-being. Theoretically, this is easy enough in the small high school with few electives. It is also relatively simple in some technical high schools where the school success of the student is involved in his health. But in the very large, highly diversified high school, with its many varied courses, it is not easy. Provision must be worked out to provide an irreducible minimum in every course, be it college preparatory or commercial, and in addition to make possible personal guidance on problems bearing on health, as these turn up in the lives of boys and girls.

The Irreducible Minimum

Basic

Simplest facts about the physiology, anatomy, and hygiene of plants and animals, including, of course, the reproductive process. This should include knowledge of the human body and human behavior.

Specific

Simplest facts about nature and development of bacteria and other micro-organisms, including the harmless as well as the chief pathogenic forms; current theories of vaccination, immunization, disinfection, sterilization and quarantine, with a command of the technique of the first two and last two, as commonly used in school and home.

Contributory

The above presupposes rudimentary instruction in certain aspects of inorganic and organic chemistry; and in laws governing the behavior of gases, liquids, solids, in their relation to daily living; application of this knowledge to the process of keeping one's self fit for personal and racial service, of caring for dependents, and of contributing to the well-being and safety of one's home and community.

Less than the preceding is dangerous in such a community as these United States, where each of us is, in a sense, his brother's keeper.

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* See references suggested in footnote, pages 22 and 23.

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In Part I are found 21 pages of stimulating questions applicable to many local situations on such topics as food, water and milk supply, garbage, safety, etc. Parts II and III give information concerning local and national health conditions.

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Chapter VI

PHYSICAL EDUCATION

As was to be expected, analysis of the findings of Section IV of the Outline gives a wide range of variation in every point, but certain facts are very significant. We find first that we have eighty-six different names given to courses in the physical education departments of fifty-three schools. This one fact might stimulate someone to work on nomenclature of courses, provided the names of our activities are of sufficient importance to warrant it. "Physical Education" and "Swimming" were each listed ten times, while "Physical Training" was listed seven times. "Dancing" was listed as a separate course five times; "Athletics" four times. Three courses received the same name three times and ten courses were mentioned twice. All of the remaining eighty-six titles were written once only. The difficulty seems to be in our definition of the word "course." Do we give courses in "Roller Skating," "Roof Class," "Physical Exercises," "Boys' Military," "Rest," "Corrective," "Boys'," "Girls'," "Big Activities," etc.? There seems to be a confusion of thought between the name of a course and the content of a course.

The two following quotations give an excellent idea of what the Outline asked for and give a feeling of unity with the set up of other subjects of the curriculum:

Name of course: Physical Education.

Purpose: To promote physical activities for benefit of all rather than for the limited few. To offer activities necessary for the development of normal, robust, organically sound bodies. To obtain a maximum of health so that we have, as a foundation, bodies free from organic and functional defects and, above all, positive abundant health with a happy outlook upon life, which will make for better citizens.

General content: Boys: Football, basket ball, baseball, boxing, wrestling, track and field work, tennis, hiking, skating, skiing, mass games, tumbling. Girls: Hockey—October, daily; speed ball, soccer—December, January, February, on alternate days; basket ball, tennis—spring and

fall; volley ball—three weeks outdoors; baseball—seven weeks outdoors; skating—winter (limited); hiking; stunts; apparatus; relays; games of all types; tumbling.

Method: Natural. Small group. Squad leaders in all activities.

Name of course: Physical Education.

Purpose: To provide a varied enough program so that every student may engage daily in some form of supervised exercise without harmful results. We believe firmly in the socializing benefits to be derived from a group working together.

General content: Fall term. Volley ball, field ball, captain ball, speed ball and baseball. Play tournaments in these.
Winter term. Marching, setting-up exercises, apparatus, dancing, group games, basket ball, ice skating and swimming.
Spring term. Field Day and May Day.

Method: Teams organized, permitting each student to have a definite place in five different groups.

Purpose of Courses

When we analyze the purposes of courses, we find ninety-three differing statements, which upon summarizing gives us the following data:

Purpose	*Number of Times Mentioned*
Training of posture	37
Strength, vigor and cleanliness	35
Recreation	15
Team spirit	14
Sportsmanship	12
For carry-over into life	12
Social qualities	12
Leadership	10
Citizenship	9

Content and Method

The specific abilities for each sport, when separate sports were listed as courses, are not included in the above table. The material which came in under the headings "general content" and "method" cannot be satisfactorily analyzed and it is evident that we need clearer thinking when we come to definite statements. Under "method," the use of squads was listed nine times,

which is an indication that mass formation of the whole group is disappearing in some localities, and that the individual needs of pupils are at least given greater opportunity for recognition.

Qualification of Teachers

There is a decided difference between the qualifications of the women and men teachers of physical education among these fifty-three schools. Twenty-nine women and eight men are graduates of special schools of physical education, twenty-one men and fifteen women are college graduates, while six women and one man graduated from a college and from a special school of physical education. Seven men and one woman are spoken of as "coaches." In the case of four women and three men experience was substituted for scholastic training and four schools gave no answer. Successful participation in college athletics has for some time been the qualification looked for in the men selected to have charge of physical education for boys in high schools. When the chief interest is in winning teams, this is a natural outcome. Many of the colleges and universities are now meeting the situation by putting in courses designed for fitting men to be leaders and teachers rather than coaches. They are preparing men to meet the newer standards indicated by the sampling of secondary schools included in this Study: namely, giving every boy a chance for the development of all the abilities and qualities claimed for those who play on school teams. The advantages of an inclusive program for girls are generally recognized, as evidenced by the more frequent requirement of special training for the women teachers, since twenty-nine women are graduates of special schools of physical education as compared with eight men.

Required or Elective

Thirteen schools require of all pupils, every year, exercise of one kind or another four or five days a week. This is a surprisingly good record and the names of the schools follow:

Berkeley High School, Berkeley, California.

St. Thomas Junior High School, St. Thomas, Virgin Islands.

Manual Arts High School, Los Angeles, California.
The Hathaway-Brown School, Cleveland, Ohio.
New Trier Township High School, Kenilworth, Illinois.
Central High School, Binghamton, New York.
Moraine Park School, Dayton, Ohio.
Barbour Intermediate School, Detroit, Michigan.
Concord Academy, Concord, Massachusetts.
Monterey Union High School, Monterey, California.
Watsonville Union High School, Watsonville, California.
Fairhaven High School, Fairhaven, Massachusetts.
Central High School, Kalamazoo, Michigan.

Number and Length of Periods per Week

The required time given to physical education in the remainder of the schools is about evenly divided between two and three periods per week. It is difficult to make any generalized statements for these forty schools because, in some, physical education is required in certain grades, generally in the seventh, eighth, ninth or tenth, and elective in others, and because sometimes more is required during certain months than in others, or more for boys than girls. When these differences are studied the reason for them appears to be an administrative one rather than a difference in the needs of pupils. In other words, it looks as though the thirteen schools listed above took the findings of the Report of the Commission on the Reorganization of Secondary Education[1] more seriously than did the others, as evidenced by their appreciation of their responsibility in the promotion of the health of the pupils. Until the administrators insist upon as thorough an understanding of the physical condition of each pupil as can be obtained in a school, in order to fit the program to each child, rather than fitting each child into a program, we cannot expect to see the right amount of time set aside for exercise. When health is considered the first objective, as recommended by the above mentioned Commission, every child will be given an opportunity to carry on the form of exercise or rest which he most needs and when

[1] *Cardinal Principles of Secondary Education*, Bureau of Education, Department of the Interior Bulletin, 1918, No. 35.

it is most needed. He will then register for an activity rather than for classes scheduled as "Gym. I, II, III" and filled according to the academic level at which the child happens to stand. There is no reason to believe that children in the seventh, eighth and ninth grades need daily exercise more than those in the tenth and eleventh, but this arrangement seems to be convenient administratively.

Every named activity is given at least once as an elective in this analysis, but dancing, swimming, football, volley ball, track, baseball, basket ball and tennis many more times than any other activity. What does this signify, if anything? Are they omitted more often from the required list because they are of less importance or because it is difficult administratively to offer them to everyone; or are these activities so popular that, given an opportunity, all students will seize it? Whenever designated, it is usually upper classmen for whom these elective activities are offered.

The periods vary in length from 10 to 150 minutes, with the decidedly favorite time of 45 minutes. Here is another proof that the child is made to fit into a program, for it is not possible to imagine that it is best for some children in the seventh year to exercise 10 minutes every school day and others to exercise one hour twice a week. Twelve of the thirteen schools having daily periods give 40 minutes and over, the majority being over.

Outdoors or Indoors

Only four schools gave no record of carrying on activities out of doors.

Courses in Order of Importance

After asking for the names of the courses, the Outline requested a list of these same courses ranked in order of importance for developing the latent power for health. The request was put in this way in order to eliminate the consideration of other obvious aims, which would naturally give different values to these same courses. Remembering that there were

eighty-six courses listed, the difficulty of tabulation will be realized but the following table gives the gist of the replies:

1st Choice	*2nd Choice*	*3rd Choice*	*4th Choice*
Games and Sports 25	Games and Sports 20	Games and Sports 11	Games and Sports 11
Gymnastics ... 4	Gymnastics ... 8	Dancing 9	Gymnastics ... 9
Corrective Gymnastics . 3	Dancing 3	Gymnastics ... 8	Corrective Gymnastics . 3
	Corrective Gymnastics . 2	Corrective Gymnastics . 2	Dancing 2

Two facts seem to stand out as the group opinion, namely that games and sports are most important for developing the latent power for health, and gymnastics the least important. We can also say that dancing does not rank high in their opinion from this point of view and that there is no unanimity of opinion in regard to corrective gymnastics. Eighteen schools did not hazard any opinion on this subject; three thought that all courses had equal value. All of which goes to show that evaluation and standards are needed. The Outline asked each school to justify this ranking and the replies stressed the out-of-doors, joy, and the big muscle activities in games and sports.

Use of Physical Examinations

The greatest use made of the physical examinations in eighteen schools is to discover the weaker pupils in order to give them the exercise best suited to their condition. Seven use them as a basis for grading all classes and it is most encouraging to know that seven physical education directors can place pupils in groups according to their various physical needs and abilities rather than according to their intellectual level and academic preferences. It is a bit inflexible to place a child in a group for beginners in "gym work" because she happens to be entering the ninth grade, and particularly if she is an example of optimal physical condition and is accustomed to vigorous out-of-door recreation. Nor because one boy prefers shop work to art should he be obliged to exercise with a group into which his physical condition does not naturally place him. It is no wonder that the use of wrong principles of selection for groups leads to a thorough dislike of "gym periods" by the

vigorous children who have to stand in line with the less vigorous and take a harmless set of exercises just because they fall into the same group academically.

In nearly all of the answers to the question, "What uses are made of the results of the physical examination in planning the physical education program?" the trend is a negative one, using the words "exclusion," "correction," limitation," and strangely enough no mention is made in this section of the report of their use for the selection of members of teams, although this is mentioned under the specific section on health examinations. This omission in the physical education section shows that when the fifty-three people who made these reports thought about "planning the physical education program" they did not naturally include their school teams within this program. There is significance in this fact in the light of many discussions on the subject of interscholastic athletics for secondary schools. Only four stated that no use was made of examinations and thirteen did not reply to the question. When we can build the whole school program to fit the needs of all pupils, we can use these physical findings far more extensively. A combination of physical, mental and ability tests with personal preferences as a basis for selection of activities, would be ideal.

Changes in Program for Girls During the Period of Menstruation

There is a wide variety of treatment of girls during the menstruation period. Considering the number of days on which they are excused or partially excused, there is a range from one day to the whole length of period, as follows:

Number of days	1	2	3	4	5	Whole period
Number of schools	1	7	6	2	2	6

When we try to tabulate how these days are spent, we find a still wider variation of practice, from a direct statement from twenty-five schools of "Excused from all activity" to the rather indefinite one, "Situation used for building a normal attitude," or "Sent to study hall" and even, "Time lost is made up." Just how the time was "lost" is hard to see. These girls were still on earth and just what did they make up and how did they

do it? By entering two classes on certain days instead of one? In fifteen schools, the girls are excused from strenuous activity but it is doubtful if the criteria by which an activity is judged to be strenuous or nonstrenuous are alike in the fifteen schools, and it is also doubtful if consideration was given to the fact that what is strenuous for one girl is not always strenuous for another.

The following excerpts from two of the reports are excellent:

Girls are given two days leave from the regular strenuous activities. Again the examination history helps here. Some girls are given from three to four days but an effort is made to keep the girls busy at limited activities, walking or horse shoes, jacks, etc., or reading current magazines and inspirational magazines like campfire journals. It is so much a mental affair that stimulation along interesting things has kept their minds off themselves. Health has been considered. The girl who wants warmth and rest gets it. Limited exercise is suggested, not forced. The rest room is attractive and well ventilated and warm. They are never sent to the study hall for we believe in relaxation at this time. Good posture is especially urged. An attitude of good health at this time is considered the thing to attain. It is quite common for the girls to talk over any abnormal trouble they may have at this period with the teacher and overcome it. Special attention is given to the young adolescent of twelve and thirteen years. If a husky nineteen-year-old wants to play and not run or jump she is most certainly allowed to participate with all regard to her health and a good understanding between student and teacher.

Every girl in the department is taught a group of eleven postural and menstrual exercises the first week of each semester. After answering roll call any girl who feels she cannot carry on the regular work in the gyms or field may go to the individual gymnasium where she takes the exercises taught. She does not detract from the individual class but goes ahead with her own work. All swimming girls take these exercises in the individual gymnasium too, or go to one of the gyms or field. Girls who decide to take regular work at that time are excused from hanging and jumping. Statistics show an average of fifteen girls a week from swimming go to the individual gymnasium and an average of five a week from the gymnasium classes go to the individual gymnasium.

To quote from the findings of the follow-up visitors:

"There is a marked tendency to encourage girls to continue gymnasium work throughout their menstrual period. There is a good deal of prejudice to overcome, and no one seems to know what, if any, scientific foundation the prejudice has. But all agree that any automatic three-day-a-month excuse is ridiculous."

There is no doubt but that all of the studies on the subject to date point toward normalcy of behavior during the menstrual period, but we need still more studies to the end that more definite standards of behavior be set for teachers of physical education to follow.

Posture and Corrective Gymnastics

The request for a description of the method used for measuring posture improvement was inserted in the Outline because of the frequent claims on the part of physical education teachers that through their work, posture is improved. It is disappointing to find very little definite proof for these statements. Five schools use the triple posture test method, which was the first definite test set up for general use, but after all it is entirely subjective; eight schools claim to do it by observation and six by re-examination by the doctor and physical education instructors. Six schools frankly say they have no method and the rest are quite indefinite, one saying, "We have no method except the eye." One of the best answers follows:

> The Bancroft triple posture test, or a four point posture test, is given to every girl in the school every six weeks and to every boy once a term. Frequent check is also made of posture in the cafeteria, in the school halls, and in other places, without the students' knowledge. The mark in posture is a composite of all these checks.

No physical education teacher would ever admit that when a child's posture needs improving he would not guarantee to do something about it provided conditions were favorable, and perhaps the satisfaction gained when all concerned agree to an improvement, is sufficient, but we shall all welcome the first real objective test that comes from the field of measurement.

To quote further from the findings of the visitors:

"There is a general development of work in corrective gymnastics for postural and foot defects; in some cases for structural orthopedic defects. The latter is an unfortunate policy because it transgresses the fundamental principal of keeping out of the private physician's field, and because time and individual attention are lacking to make such work effective. This is not true of the other type of corrective work, however. It

is mentioned here only because there seems to be a real danger from overenthusiasm, not safeguarded by medical advice."

Evidence of "Carry Over"

Twenty-nine schools claim "visual" and "reported" evidence of the leisure time use of the activities taught during school hours. Very few give definite figures on this and it is very easy for an instructor to be misled by the evidence of enthusiasm of a small proportion of students. The three following answers are quoted for their excellence:

During the spring term the girls in a few typical classes were asked to tell how they used the things they learned in the physical education classes outside the school. From 122 answers the following things were reported:

84 play baseball in the neighborhood.
85 swim at the lakes near the city.
18 do folk dancing outside of school.
30 practice athletics at home (hurdling, running, running hop, step and jump, and ball distance throwing were mentioned).
14 pitch quoits.
23 play volley ball.
14 play basketball.
18 play patch ball.
32 hike (hiking is a part of the physical education work and the Hiker's Club arouses an interest).

For boys—a large number took part in the city recreation program during vacations and non-school time.

The school organized a leisure time program similar in content to the physical education school time program. The fact that 60 per cent of the students (boys 75 per cent; girls 45 per cent) participate in this program indicates that students make use of activities taught in school physical education classes. The school and city playground departments report that there is a demand, on the part of high school students, for the kinds of supplies and equipment that will enable them to participate in activities learned at school, such as facilities for tennis, for volley ball, for playground baseball, and for forward pass football, all of which games are taught in the high school. Volley ball is the most conspicuous example. Before volley ball was taught in the school there was no demand on the public playgrounds for volley ball equipment. Now volley ball is ranked among the popular sports.

The girls use the gymnasium, special exercise rooms, courts, playing fields, rinks, etc. when not under supervision. There are many times during the year when for some reason the afternoon period of exercise between 3:00 and 5:30 is not formally organized by instructors. During any of these days the equipment is used almost 100 per cent. Some will be in the gymnasium playing indoor baseball, shooting baskets, or having all

sorts of "pick up" games. Down in the boxing, wrestling and special exercise rooms you will find them. If it is winter the three hockey rinks will be filled and others waiting to get on when there is an opening. Others will be coasting or skiing or making a snow fort. It makes it very easy during these afternoons for the director as the boys keep busy and happy of their own accord. The girls come back three afternoons a week of their own accord for organized sport. This voluntary attendance is 100 per cent and is excellently planned and carried out.

Boys' Athletic Program

The aims for the boys' athletic program were about evenly divided between "general development—mental, physical and moral" in fifteen schools; "physical fitness" in twelve and "to build attitudes for play to carry over into life" in ten. Three schools gave as their aim "to promote school spirit," and one "to respect authority of superiors." The following answer seems to embody the spirit expressed by many:

To supplement the required activity in order that as many boys as possible may get enough big muscle activity to secure development; to give a normal outlet for the play instincts; and to develop habits which will give them a basis for constructive use of leisure time.

The proofs for the accomplishment of aims were very scattered, the slight majority being for "voluntary participation." The next largest number gave "winning teams and trophies," and yet no one offered winning teams and trophies as an aim. Would these schools who give these evidences of victory as proofs of success, be willing to set their opposites down as proofs of failure for the years when they did not win anything?

Girls' Athletic Program

The aims of the girls' athletic program covered more ground than those for boys and the question was more generally answered. "Leadership" and "sportsmanship" were more stressed. The following three quotations are illustrative:

Promotion of physical activities for all girls, suited to individual needs and capacities, under conditions that encourage health, physical efficiency and good citizenship, in play for play's sake.

1. Provide opportunity for every girl to have a full season's program of every athletic activity offered.
2. Provide opportunity for every girl to play on a team.
3. Develop a love of recreation and a desire for wholesome activity.

Healthy wholesome recreative activity accessible to every girl in the school.

Voluntary participation and character development are the two leading proofs given as evidence of success in the girls' athletic program. Improvement in ability and in health and a greater interest stand next in order of frequency. A better type of clothing and fewer absences are offered as proofs of success. Here again it is very difficult to say how far athletics have contributed to some of the improvements noted and as the statements in the reports are quite general and made from observation rather than actual figures, it would be difficult to vouch for their reliability. Only three schools gave definite figures as evidence of success. Figures give a clearer picture of the situation than general statements. For instance, when we read that "45 per cent of the girls come out for some elective after-school activity," we know more about the situation than when we read that "a large number of girls take part in play activities." Yet figures can be handled in such a way that they tell very little as in the following report of growth in numbers of participants:

1920-21	—	8
1921-22	—	55
1922-23	—	96
1923-24	—	303
1924-25	—	375

The above figures look very encouraging for a small school but there is no indication that the number of participants has kept pace with the growth of the school. Upon looking into the report we find that in 1924-25 there were 1808 girls registered. This shows how easily we can be misled by the appearance of a busy play field. We do not at the same time see how many pupils are in moving picture houses or riding in automobiles.

Another statement made is that "750 played basket ball, volley ball and indoor baseball. A hundred elected class activities in tennis, basket ball and swimming." Here again, if we knew the percentage we should have a clearer picture. However, the records show that 898 girls attend this school, which gives a splendid proportion, especially if all of the 750 played all three games at different seasons.

The following is the most comprehensive answer:

1. Large number of girls participate in games.
2. High physical efficiency as shown by tests.
3. General good health as indicated by interest in school activities.
4. Low rate of absences.

Two schools write that they have no proof and two write that their aims are not yet achieved.

Regulation of Girls' Athletics

The replies to the questions concerning differences in regulations for athletics for girls from those used for boys are particularly interesting. Thirty-six schools use girls' rules, while three use boys' rules. Five state very plainly that they make no effort to develop stars or winning teams among the girls and four write that they follow the platform of the Women's Division of the National Amateur Athletic Federation.* The schools reporting the use of girls' rules in basket ball also report a modification either of distance, time, or weight of apparatus in many games and sports where originally standards were set up for men and boys. There are, of course, certain exceptions such as tennis and volley ball. The reasons given for these modifications are mostly along the line of caution from the standpoint of health protection. They show much unanimity of opinion and are therefore quite convincing, but the field of research along this line is wide open. There are people who argue that until one standard of athletic performance for boys and girls is scientifically proven injurious to girls, we should encourage the same. The majority, however, take the opposite stand and knowing the lack of data upon which to base their opinions, they prefer to follow their belief that the structural and functional differences between boys and girls are indicative of a variation in athletic ability, a variation in the effect of athletics upon health and upon the natural choice of activity. The following quotations show both the general trend of opinion and how little real data we have upon which to build our opinion:

> We use in basket ball the girls' rules for playing. Due to the short time our girls have been in training their muscles are not hardened but we hope to give a program where girls may become physically fit to do the regular athletic work.

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* Room 1005, 303 West 42nd Street, New York City.

Not the same rules, some of the same events but none of the same standards. The girls' athletic program is fostered by the girls' athletic association, which has its own governing council made up of the officers, plus two teachers of the high school (one of whom is the health education teacher). Interschool competition has no place on the program; an intramural program, culminating in a schedule of games between "color teams" is the substitute. Every girl makes some team and participates in the tournament (provided she is physically fit). At the end of a tournament a team is picked to represent the school (merely honorary) in that particular sport—taking into consideration the spirit and skill of each player. Points are awarded (according to a well organized point system) to members of the color teams, and additional points to members of these honorary teams. Aside from the physiological reasons against interschool competition for girls, there is the economic reason which justifies this arrangement of schedule even to the untrained person.

Girls' rules are much the same as boys' rules in everything except basket ball and track. In basket ball the girls' rules are strictly observed. Boys' rules are much too strenuous in this sport for girls. A few of the boys' track events are omitted, such as pole vaulting and cross country runs. These events are found to be injurious to girls.

In coaching girls' athletics we do not use the same standards as for boys. The physical make-up of girls is not meant to stand such strenuous activities as boys.

The standards and rules are not the same as for boys. It is impossible to give differences in girls' program from boys' program of athletic activities in this paper. The problem is not one of copying the men's organization but of developing the program best fitted to the needs of the girls . . . The aim of the department, in its after-school elective "girls' athletic association" activities, as well as in the regular program, is entirely in sympathy with the principles laid down by the Women's Division of the National Amateur Athletic Federation. The department attempts to build up its work for girls as girls, with every regard and provision for their special needs and conditions.

No, we have different standards and rules because we have a different problem. Do not charge for games. Our aim is not to turn out winning teams but to interest many girls in athletics. Girls win points through number of practices they come out for as well as place they hold on team. Boys win points for playing so many match games.

No, girls' rules, standards, etc. Girls' rules to be had for activities. No emphasis on record to be made, or beaten in athletics. All competition is intramural. Membership in the National Amateur Athletic Federation gives us a recognized standard for the conduct of girls' athletics.

Boys' rules, standards and events are not used for girls. Girls have an entirely different program which is based on their physical abilities. All girls' games and events have their own rules and standards. This has for its justification the fact that it takes into consideration the physical development of girls of the intermediate school age.

Rules, events and standards used for girls' athletics are not the same as those used for the boys. Only intramural competition is allowed. No admission charged for games. No advertising. The pleasure of the game is

emphasized rather than the victory. Points are awarded for the number of hours spent in practice. Monograms are awarded only when a sufficient number of points have been earned in at least three activities. Girls play for the fun of the game, and dangers of exploitation and commercialism are avoided. Object—to train our girls for womanhood, avoid dangers of overexertion and wrong emphasis.

We are now working on the standardization of athletics for girls. In basket ball we use girls' rules, also in track work. A girl is handicapped physically. After puberty the body rounds out and the pelvis is so constructed that it interferes with certain types of athletics. There is a great difference between the boy and the girl, the size of the bones, the development of the muscles, and the mental attitude toward athletics is different. We should not require the girl to run with the same speed as the boy or jump as high as he.

In Favor of Boys' Rules and Interschool Competition for Girls

The three following quotations showing the only expressions from the other viewpoint are of interest:

Yes. May possibly be changed another year though the coach considers boys' rules safe if closely supervised, and an aid in developing the body. Boys' rules might possibly keep some girls from joining the sport. All schools should use uniform rules that contests may be fairly played. At present all schools of our class about us are using boys' rules.

The girls' athletic program consists of interschool basket ball. This year we changed to girls' rules. The team is coached by the principal although many do not favor girls' interschool athletics. We do not feel that our school has suffered in any respect from this form of athletics. Our athletic program develops and fosters school spirit.

The only change is, the arduous outdoor training is not required for the girls.

Ability Tests

Twenty-two schools give some sort of ability tests to boys and twenty to girls. Very little specific information is included on this subject except in the following quotation which gives us a picture of great care in functional tests:

The functional tests include

1. Tests of neuro-muscular strength and skill in the following events:

Boys: Pull up.
Running high jump.
50 Yard dash.

Girls: Basket ball throw for distance.
Baseball throw at target, 35 feet.
Running high jump.
50 Yard dash.

2. Posture tests. Bancroft's triple posture test.
3. Tests of general organic efficiency in:
   a. Body weight* in relation to height.
   b. Breath holding.
   c. Pulse rate: normal, immediately after exercise and 90 seconds after exertion.
   d. A short endurance run, carefully controlled at a slow pace. Evidences of condition as indicated in breathlessness and fatigue are noted.
   Boys—Half mile run in 3½ minutes.
   Girls—Potato race.
   e. Corroborative evidence, such as pallor, listlessness, or skin eruptions, is recorded and taken into account in interpreting other test data.

Responsibility of Physical Education Teachers for Health Instruction

In the information gathered under the heading "Specific Health Instruction" we find that in eleven schools the one who is responsible for the planning and supervision of definite health instruction is a physical education teacher and in eighteen schools physical education teachers actually give this instruction to the pupils. These figures place physical education teachers at the top of the list for holding the responsibility in the inclusive health education program. The reasons for this choice and its advisability are discussed in the chapter of this bulletin on the "Plan of Coordination" and need not be repeated here, but if this procedure on the part of administrators is to continue, the teacher training institutions specializing in physical education should expand their courses to include at least a bowing acquaintance with the wealth of subject matter and new materials which are now considered basic and contributory to health education and a familiarity with the rapid advance in method for presentation of this subject matter and material.

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

The following quotation is from one of the visitors' reports:

"The work of the physical education director is generally recognized as a most significant part of the health program. The tendency is to have too much on his or her shoulders. In five of the eight schools studied, it is taken for granted that the phyiscal director is headquarters for health information, supervision and inspiration. Formal hygiene instruction is given by physical directors in six of the eight schools. In most cases this teaching is not regarded by them as adequate."

Strongest and Weakest Part of the Program

Sixteen of the schools give physical education as their strongest asset in the school health program. An analysis of the reasons given for this opinion shows that good instruction and a modern type of program account for eleven. Nine give effect on health and character as their reason, five, the amount of time given to physical education and four, the good equipment, while another four say it is because of the pleasure involved. Scattered reasons were: work done out of doors, more money expended, good morale of the department. Three schools give physical education as their weakest asset due to insufficiency in personnel, time and equipment. When such reasons are given, the word "alibi" is suggested.

The general comments after a visit to eight schools made by one trained in science, and not in physical education, give much food for thought and are here quoted:

"Boys' athletics are generally exploited commercially, and no one sees much hope for the future. Some fine work is being done in this field, against all the odds of 'school spirit' and Chamber of Commerce pride. The relation of physical education men to the problems of smoking and drinking is direct and important; they feel the need of help in dealing with this situation. A study of tobacco in relation to growing youth, in terms which can be used by these men, would be of great help to them.* They are agreed that the method of preaching against the sin of tobacco-using is out-of-date, especially now that a good many

*Since these comments were made, such a study has been published at Antioch College, Yellow Springs, Ohio, entitled "The Student Who Smokes" (1926).

mothers and sisters and most fathers and brothers smoke. The situation with regard to drinking calls for a sound plan of procedure. Drinking is not felt to be common among the young people of these schools, though smoking is.

In general, the physical education teachers' strong point is their wholesomeness, their interest in the best program for a normal healthy child. Where other members of the health service personnel tend to concentrate on the abnormal, they redress the balance. Their weakest points are the moral and health hazards of competitive athletics in youth, and their own inadequate preparation for many phases of the opportunity opening up to them. Where assisted by a good physician, they are doing some excellent work in health development. Nowhere are they dealing adequately with the health instruction problem, for in this field there is no trained specialist to assist them. * * *

Various casual observations lead me to question whether the girls' program in physical education is as good psychologically as the boys'. There seems to be a good deal more going against the grain with the girl. Perhaps it is necessary. It seems to be hard to persuade girls to take showers after exercise, and hard to get their wholehearted participation in games."

If physical education teachers can harness their enthusiasm and wholesome outlook to a more scientific point of view, with an open minded desire to face facts and work out new adjustments for the old problems, they will hold their rightful place as large contributors to the health of all secondary school pupils.

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Chapter VII

HOME ECONOMICS

IT is interesting to note at the beginning of this chapter that home economics was listed in the Outline of this Study as a basic subject in health education. After discussing the matter further with several home economists and other health educators, it has been reclassified as a contributory subject. This classification is quite in keeping with the purpose of home economics education as accepted by the home economics group, "to improve living conditions in the home and community for the fullest development of the family and its members."

Significant Facts

Since "Home Economics" is the accepted nomenclature of the American Home Economics Association, it is a surprising fact that in the fifty-three schools of this Study there are twenty-three different titles given to this course. This goes to prove that even though a standardized term is accepted by a professional group, it must be approved by the public and educational administrators if it is to be universally adopted. Too many people, even educators, still think of home economics as involving only the processes of cooking and sewing. The home economics teacher has been responsible to a considerable extent for this attitude. In many instances she has emphasized the development of skills as an end in itself, failing in many cases to appreciate that the homemaker of the future needs to be equipped with more than skill in meeting homemaking problems. This attitude is however rapidly being changed through training and a finer appreciation of the content of the home economics course.

Comparative Study of the Place of Home Economics in the School Program

The schools represented in this Study indicate the following variations in the organization of the home economics program:

Basic subject—thirty-nine schools.

Contributory subject—two schools.
Specific subject—no school.
Grades—seventh grade through the twelfth grade.
Length of course—eighteen weeks to a four year course.
Length of period—forty-five minutes to one hundred and ninety minutes.
Number of periods per week—two forty-five minute periods to fifteen forty-five minute periods.
Credit given—no credit to four units of credit.
Required course—twenty-four schools.
Elective course—twelve schools.
No home economics work given—twelve schools.

The weakness of this varied program in home economics can readily be seen. No standards for successful organized work can be drawn from the above statistics. Some of the schools take the work seriously and rank the course with other subjects rather than as a "special subject." It is doubtful whether a course meeting as few times as some of the reports indicate can make a lasting contribution to the health program. It is gratifying though to note that the home economics teachers have a high consciousness of the need of up-to-date and thorough training. Ninety per cent of the home economics teachers in these fifty-three schools were listed as college graduates.

The Home Economics Teacher and the Health Program

It has well been said that the home economics teacher has an important role in the health education program "if she is alert to see and use her opportunities and is up-to-date in her subject matter." To make her largest contribution the home economics teacher should build her courses around the individual pupil, the home from which the pupil comes and the local community. She should know the food customs of the child and the family, the average income, size and living conditions of the family. It is a poor teacher who without adequate knowledge of her pupils wholesalely states that every child must have a quart of milk a day. A large city family whose sole income is that of a day laboring father would find it impossible to buy a quart of milk a day for each of the children. There are many things that control the type and amount of food of a family. These include income, size of family, labor involved in the preparation of the food, age of the different members of

the family, type of work done by the different members, location, market facilities, etc. In brief, the home economics teacher should make close application of food, nutrition, clothing, the home and its environment, individual and personal hygiene, the child and its training, to each individual pupil in her class.

With her specialized training in nutrition and food study in relation to the family and its members, the home economics teacher is particularly well qualified for supervising the school lunch. Likewise she should be active in the campaign against the sale of unwholesome food in the school neighborhood. She should also feel a responsibility in checking the health practices of the pupils in so far as they touch her field of work. It may be through the classroom, through individual conferences, through the school lunchroom, through school activities or through home visits and contacts.

The home economics teacher who preaches but does not practice health habits is seldom successful in her work. If she wears inappropriate clothing, eats unwholesome food at irregular hours, fails to sleep and exercise a sufficient number of hours and is careless as to proper elimination, she will get little return from her teachings.

The home economics teacher should feel that her work is a part of the health education program but not the entire program. Home economics is a composite subject and is dependent to a large extent on the subject matter of other courses, such as, the physical sciences, social sciences, physical education, art, literature and history. Therefore the home economics teacher should coordinate her work with that of the other instructors in every way possible.

Home Economics in Its Relation to Health Objectives

It is an indication of significant progress to read the description of the far-reaching and practical activities included in several of the home economics courses of these fifty-three schools and to sense the contributions these courses make to the school health program. For instance, the home economics department in one of the schools seems to have caught the spirit of health education as the outline states that the school

has related its home economics work to the health education program through:

1. Interest in the influence of clothing upon health.
   a. Warmth.
   b. Ventilation.
   c. Freedom of movement.
   d. Cleanliness.
2. Interest in good living habits in order to insure health so that one may fully enjoy life.
3. Interest in healthful food.
   a. Cost.
   b. Preparation.
   c. Serving of.
   d. Choosing of.
4. Interest in dietary requirements of the body.
5. Interest in a healthful, orderly, comfortable home.
6. Interest in food functions.
7. Interest in personal health, correct diet, and correct care of the body.

For developing health responsibilities in the individual pupils, the home economics department has listed the following as necessary:

1. Habits.
   a. Wearing of neat and sanitary clothing.
   b. Habits of diet.
   c. Self-control.
   d. Self-respect.
   e. Proper regular habits of living.
2. Attitudes.
   a. Increasing desire for right and proper kind of clothing.
   b. Interest of good results in good habits.
   c. Love of family, neighbor, community and country.
3. Knowledge.
   a. Right kind of clothing.
   b. Rules of diet.
   c. How to prepare and serve wholesome food.
   d. Knowledge of household problems.
4. Check.
   a. Observation of girls' clothing.
   b. Weighing* girls and keeping weight charts.
   c. Use of health score cards.
   d. Food selection score cards.
   e. Note books.
   f. Discussions.

Another school emphasized in its outline, a clean laboratory, personal cleanliness when handling food, sanitary dish-

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

washing and care of tea towels, the need of a well balanced breakfast, health rather than skill in food preparation, how to choose your lunch in the school cafeteria, visits to markets and stores for the purpose of studying sanitary conditions, and the use of labor saving equipment in the home in order to give more time for recreation and leisure. Several of the home economics classes in this school prepared breakfast, luncheon and dinner posters which were exhibited in the cafeteria in order to help the pupils to select better balanced meals. Another class compiled a series of menus that were printed on folders in the printing department of the school and given to each child in the building to take home to the mother. This department is also spending a large amount of time with the underweight* children and the girls who come to school every day without breakfast. If the proper food fails to bring about results, the case is referred to the hygiene department.

The clothing department of this school also emphasizes the personal cleanliness and proper dress of the girls enrolled in this work through:

1. Cleaner girls.
2. More attractive and better dressed girls.
3. Knowledge of fibers so that proper kind of clothing is worn at various seasons and occasions.
4. Right attitudes toward appropriate dress.
5. Better posture.
6. Care of eyes—need of right seating position for best light.

The girls grade each other on personal attractiveness and cleanliness each day.

The home economics department of another school states very briefly that its health objectives include "the relationship between diet and health, clothing and health, personal hygiene and health, and home and community and health." It is an accepted fact that girls of high school age have an abnormal appetite for sweets and pastry but this report states that "the girls eat more vegetables and graham bread than their natural interest would demand" and that "some girls stimulate their mother's interest in corrective and preventive dietetics for obvious tendencies that are undesirable." This indi-

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

cates that the home economics teachings have helped to promote an interest in desirable food habits. The course in Shelter at the school includes "a study of standards of living including food and clothing budgets. The minimum for health maintenance is dwelt on, health coming first and economy given second place."

A questionnaire filled out by two hundred and twenty-five girls after they had taken the home crafts course revealed the following interesting statistics:

Cared for the sick at home—39 per cent.
Assisted in the care of the sick at home—38 per cent.
First aid given—35 per cent.
Cared for children, one week to eleven years of age—59 per cent.
Understood personal hygiene better—95 per cent.
Had higher standards for health—91 per cent.

The foods course in this school is an elective course for freshman girls. A questionnaire was submitted to three hundred and eighty girls taking this course. This questionnaire revealed that sixty-five per cent of the underweight* girls in the school had gained in weight and that eighty-three per cent of the overweight girls had reduced in weight. It also brought out the facts that the number who drank coffee every morning had been reduced eight per cent and that the number who drank it occasionally decreased twenty-one per cent and that the number who never drank it increased twenty-nine per cent. In this same group, the number who drank milk every day increased eight per cent and the number who never drank milk decreased sixty-two per cent. The questionnaire showed a decrease of twenty-two per cent in the number who did not eat breakfast before going to school and the number who never went without breakfast increased eighteen per cent.

The home economics department in another school makes the following statements as to its participation in the health program:

The girls of the high school are attracted to the home economics course by a desire to know the common rules of etiquette, to improve their personal appearance, and to prepare foods scientifically. The boys are offered a similar course to satisfy the same interests. It is possible to check up the results achieved through this course by the problem method. Each

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

student is given a project to carry on outside of the regular class period. These reports are presented to the group and the results given. Improvement in the type of clothing worn is also developed in the clothing course.

The home economics course for boys in this school is an elective course offered to juniors and seniors and the topics of this course include, nutrition, etiquette for all occasions, choice and care of clothing, and finances of the home. As a check on the results of the work done in this class, the members were asked to write a criticism of the course. Some of the statements are as follows:

The class discussions have tended to raise our moral standards and have taught us the proper respect and treatment of girls.

Through our talks on parenthood we now realize the effect of bad habits on later life.

One thing I hope never to forget is our study of the care and training of children. If all boys could study this course in the way we have, it would mean a better generation.

While I was in training for football, my knowledge of nutrition helped me to increase my weight* to normal so that I was a more valuable man to the squad.

In another school, the courses are organized for industrial and business girls and therefore are closely related to the problems of these girls. The outline of their health program states that:

The foods course emphasizes, first, cleanliness, and second, economy of a well balanced simple meal. The pupils come back with results and mishaps of school recipes tried at home. They often bring samples of dishes peculiar to their native land for a dietetic opinion from the teacher.

The report of another school states:

The home economics course includes a study of food and nutrition, dietetics, household management, home nursing and child care, home sanitation, textiles and clothing, all of which give a definite contribution to the health program. Some of the health aims and activities of the foods and nutrition courses are to:

1. Interest the pupils in the relation between good food and the health and happiness of the family.
2. Teach them how to plan simple well balanced meals to meet the food requirements of the family.
3. Teach them the proper selection of a school lunch and the relation between food values and the cost of food.
4. Teach the girls in the business divisions the relation between good food habits and working efficiency.

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

Some of the results of the marketing course are:

1. The girls have taken a keener interest in the sanitary condition of the stores and appearance of the clerks.
2. They have learned that quality and not quantity counts.
3. They have succeeded in getting their mothers to trade in clean stores and markets.
4. They have obtained the cooperation of the milk inspectors in getting more frequent inspection of the milk and cream sold in the stores.

Much of the work of the food classes in the home economics department centers around social problems. They serve many luncheons for classmates, teachers, school officials, visitors and parents. In this way they become familiar with the planning and cooking of well balanced attractive meals and appreciate the influence of pleasant cheerful surroundings on the mental and physical wellbeing of the individual while eating.

The health habits stressed in the clothing and textile courses are:

1. Actual improvement in personal neatness and posture.
2. Wearing of suitable school dress that allows for freedom of movement and the wearing of hygienic underwear and correct shoes.

Home Economics and School Activities

One of the most far-reaching projects reported by any school is a vocational home economics health club. The work of this club can be summed up in Article II of its Constitution which states: The object of the club shall be to promote good habits of health among its members and to study interesting articles on health problems. The club has its officers and conducts its meetings according to parliamentary procedure and plans its programs and activities for the year. One lesson each week is devoted to the club meeting. Occasionally speakers of prominence address the club at open meetings to which girls of other clubs are invited. At the close of the year the girl showing the greatest improvement in her health habits, physical development and posture is given a prize by the club members. Last year the club planned a daily midmorning lunch for the underweight* girls in the school. The members of the club weighed all of the girls in the department and kept their weight charts. The project has developed thoughtfulness and care for others. Each member of the club is expected to keep a health club record. Thus the projects of this club not only

* For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

affect the health of its members but the health of the entire student body. The health work of the home economics department was also motivated through the participation in the construction and care of athletic suits, the making of costumes for various dramatic projects and the attractive furnishing of recreational and rest rooms in the school. The health work of any department will always be more pertinent if carried on through interest and live health projects. Picnics, hikes, and various outdoor activities offer the home economics teacher a wealth of opportunities for guiding the pupils toward better food habits. Too often these outdoor picnic lunches have consisted of frankfurters, pickles, pop, potato chips, rolls and bananas.

The big value outside of the increased interest in using a real problem is that of cooperation. This spirit of cooperation should dominate every home economics teacher in building a well integrated home economics program. Home economics is a composite subject and will function best if it is closely tied up with the activities of the school and community. The earlier we appreciate that no subject is functioning unless it is dealing with immediate and live issues the earlier home economics will find its real place in the curriculum.

It is interesting to note that the physical training department and the home economics department worked out a cooperative program in several schools. The physical training department usually assumed the responsibility of teaching the personal hygiene courses. The home economics teacher in cooperation with the teacher of physical training could well emphasize the relation between good food, proper elimination, the right mental attitude and wholesome exercise during the menstrual period of the girl.

Home Economics and the Nutrition Program

Many of the schools have reported active nutrition programs throughout the entire school, promoted largely by the home economics department. The nutrition work has in several cases been correlated with the work of the Junior Red Cross and the Boy Scouts. Several of the schools reported practical

nutrition projects conducted through the lower grades by the home economics classes. In these projects each girl was given the responsibility of watching and checking the nutritional and related health habits of an individual pupil. By applying the principles of nutrition in this concrete way the student was made more conscious of her own nutritional needs.

One high school held a conference for the mothers of underweight* children. Seventy-five per cent of the mothers were present. The home economics department prepared printed sheets giving food suggestions for these mothers so that they could better cooperate with the nutrition program for this group of children. Such a piece of cooperative work is most worth while as it ties up the classroom instruction and health services of the school with the home.

The Home Management Cottage and Its Relation to Social and Emotional Health

Only one school out of fifty-three was using a home management cottage in connection with the regular home economics work. In this school, the girls were having the opportunity to carry on homemaking problems in as normal environment as possible with specific services in mind. Sometimes the problem was a dinner for the athletic boys, sometimes a dinner for special guests of the school, at other times it concerned the care of younger brothers and sisters, brought to the home management cottage. Such a cottage offers also an opportunity for developing the social and emotional life of the girl in a wholesome manner.

A practical application of the homemaking course as taught in a vocational school for girls is well carried out on "The Farm." "The Farm" is a real one located several miles from the city where groups of thirty girls at a time spend three weeks during the summer months with no expense except train fare. During the three weeks' time, each girl covers a program including:

1. Three days in the morning kitchen squad.

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

2. Three days in the afternoon kitchen squad.
3. Three days in the vegetable garden and laundry.
4. Three days in the care of the house and dormitory.
5. Six days in farm work.

Each day is scheduled on the basis of three to five hours of carefully planned work. The girls work in squads of five, with one girl, who has shown superior ability assigned as captain. The buildings include a charming old farm house with dining room and bedroom for the staff, two dormitories for the girls and a recreation hall. The house is simply and attractively furnished offering a good background for a home training course. The girls carry on all the work of the place, preparing and serving meals, washing dishes, cleaning the house and dormitories and caring for the flower and vegetable gardens. Squads are assigned to duties for three days in succession at the end of which the program changes, each squad progressing to a new type of work.

Child Development and Health

The child care and training unit is rapidly becoming one of the vital problems of the home economics course. It not only includes a study of the physical care of the child but also a study of its mental and social behavior. Several of the schools reported courses of this nature; of these the child care and training unit included in the home crafts course of one school is unique. This course is required of boys and girls during the junior year and meets two periods a week. The work is given in segregated classes. The girls take up the study of nutrition, clothing, first aid, the home and child care, while the boys study nutrition, clothing, the family, the budget and child care.

The health director of one of the participating schools in this Study has recently written that at the request of the student body a new course in child care and training was started in the fall of 1926. This course was offered for a six months' period to the senior boys and girls under the direction of the home economics teacher. Special talks were given by outstanding homemakers and individuals of the community, and the course was organized around the study and observa-

tion of the preschool child. Committee work and reports from the individual members of the class were included in the classroom work.

This course will no doubt give the boy and girl an appreciation of the whole child and could well be related to the observation studies of each pupil. It is a progressive step for high school students to request a course of this type and it would be well for other schools to encourage this phase of home training.

The School Lunch as an Educational Factor

The school lunch offers a practical project for the home economics department. The home economics teacher with her special knowledge of nutrition and food preparation should feel and have a responsibility in the supervision of the school lunch in so far as it is possible and advisable. Of course in a large school system it would not be advisable for the home economics teacher to assume this responsibility. In this case it should be under the direction of a trained dietitian who sees the child as an individual and who appreciates the school lunch as an educational factor in the school program rather than as a place to feed and make money. The majority of the fifty-three schools reported school lunch work under the supervision of either a home economics instructor or a trained dietitian. The outstanding feature in relation to the school lunch in all of the reports is the emphasis given to wholesome food and absolute cleanliness in the handling of food.

One of the schools has directed a most interesting and successful health education program through its school cafeteria. This was done under difficult circumstances. It used

milk posters and other food posters to illustrate health points and to call attention of the pupils to certain foods which are especially necessary for health. These were changed regularly each week.

The menus emphasized soups, meat substitutes, fresh vegetables, salads, milk, cookies, whole wheat breads, fruits and simple milk desserts. The report states:

In the past two years the sale of vegetables, salads, and breads has more than doubled and pie is not served more than once every six weeks and cake about once in two weeks, but cereal and fruit cookies are frequently served.

This school also built up a fine social atmosphere in its school lunchroom and allowed forty-five minutes for lunch rather than a hurried lunch period. The student council has taken an active interest in the management of the school lunch and issued the following statement:

1. The school lunch period affords an opportunity to
   a. Eat luncheon.
   b. Meet your friends socially.
   c. Relax from school work.
   d. Get fresh air.
   e. Review plans for the afternoon.
   f. Show true building spirit.
2. In order to maintain the noon program
   a. Assemble in the lunchroom promptly and quickly.
   b. Be ready to move when the line is called.
   c. Keep the lunch line moving evenly.
   d. Know prices and make decisions quickly.
   e. Speak distinctly so that your order can be filled promptly.
   f. Be responsible for leaving the floor and dishes in good condition.
   g. Stack the tray and dishes in the cart according to size and kind.
3. Courtesy in the lunchroom.
   a. Show courtesy by keeping your place in the lunch line and lunchroom.
   b. Respect the rights of those who occupy the same seat in the lunchroom regularly.
   c. Remain seated while eating.
   d. Comply with any suggestions made by the housekeepers.
4. Show utmost courtesy to the cafeteria help.
5. Play fairly with your parents by using the table manners you have been taught.
6. Leave the lunchroom promptly when finished so as not to disturb others.

This school met the problem of a crowded old building by utilizing the classrooms as well as the regular lunch room. This has been done under careful supervision by both representatives of the faculty and student body.

Another school emphasizes

the selection of proper food in the lunch room through quality and quantity of the food served for the price charged. Fruit and vegetable dishes are often served below cost in order to stimulate their use. The foods are displayed so that the fruits and vegetables in salads and at the hot counter shall be served to the students before the desserts, in order to encourage the proper selection of foods. A sunny, cheerful, well ventilated and attractive lunchroom on the ground floor of the main building makes a

natural social situation which results in good behavior on the part of the students.

This school suggests that its future program

provide an outdoor luncheon place near the athletic field where a program of noontime recreation would be organized, thus accomplishing the double objective of providing a good substitute for the neighborhood store lunch and of providing wholesome recreation in place of walking the streets in the downtown shopping districts.

In connection with the cafeteria course of one school, "food talks" are given on

Nutrition.
Developing good food habits.
Table manners.
Diet and health.

All the recipes prepared in the cafeteria class are prepared in family quantities and repeated in order to provide sufficient food for the school lunch.

One school reported that it had met the candy problem at the lunch period by placing the candy counter at the exit of the lunchroom. This arrangement not only reduced the purchase of candy, but also helped to avoid the danger of checking the appetite for more wholesome food at lunch time.

The "plate lunch" is used in a great many of the school cafeterias and offers an opportunity for training the pupils toward better food habits. This idea no doubt originated in connection with the training diets provided by so many schools for their athletes, but it has a much greater service in providing a wholesome lunch for all pupils and as an educational method for training the pupil to select the right food.

One of the schools reported that they solved the difficult situation of serving the best food at a low price and meeting expenses by enlisting the cooperation of a Service Club of boys who helped the cafeteria manager in preparing and serving the food in the school lunch. This group was a volunteer group but the cafeteria manager reported such interest on the part of these boys that they consulted her almost daily about diet problems that they were meeting.

The home economics department of still another school helped to prepare the meals for practical work. This method

of motivating the home economics classroom work and of utilizing the food prepared in the class is a very commendable one and one that more schools might employ.

In order that the school lunchroom might participate to its fullest extent in the health program the following needs should be met:

1. A well trained home economics woman or dietitian for directing the organization and operation of the school lunch.
2. Wholesome and attractive school lunchroom for furnishing an opportunity and encouraging wholesome social intercourse between boys and girls.
3. Careful supervision of midmorning and midafternoon lunches for the malnourished and underweight* children in the school.
4. Self-direction on the part of the pupil in the wise choice of food. This can be promoted by means of posters, elimination of unwholesome food by the substitution of attractive and appetizing food, plate lunch, etc.
5. The best and most attractive food at the lowest price possible. More and more progressive schools are including the school lunchroom director as a regular member of the faculty and considering her salary as a regular part of the school faculty salary budget rather than attempting to pay her salary out of the school lunch fund. These funds should be spent for the purpose of the best food and for the general upkeep of the school lunch. At all times the school lunch should be considered an educational part of the school program and should not be exploited for the purpose of making money.

Home Economics and the Health Examination

The health examination which is an essential part of school health service work was well carried out in the majority of the schools but little correlation was mentioned between the correction of defects and the service that the home economics teacher could perform at this time. In so far as possible, the

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

home economics teacher should feel her responsibility not only in relation to the underweight* and malnourished pupils in her own classes but should try in every way to overcome these defects with other pupils of the school through the cooperation of both pupils and parents.

Home Economics for Boys

It is gratifying to note that two of the schools permitted boys to enroll in the courses and one school even went so far as to state that the home crafts course was a required course for boys as well as girls. Homemaking is not limited to women but involves to a large extent the interests and responsibilities of men and it is hoped that in the future such courses will be sponsored by more schools. Recognition will come only as such a course is vitalized with live and practical problems of the home. One of the follow-up workers while visiting a school asked a boy who had taken the home economics course what he thought of the course. He replied, "I got more out of that course than any course I have taken in school." A report from another school states, "We want what the foods class is getting to extend to all boys and girls especially that part that affects individual health."

Summary

In summarizing the work and the opportunities of the home economics department in the health education program, it is well to bring to the attention of school administrators and home economics teachers the following points:

1. Home economics is a vital subject in the health education program through its food and nutrition, clothing, housing, child care and training, and family relationship units.

2. This course can function best in the health education program when opportunities are presented for it to be vitalized through activities of the school, the home, and a home management cottage or apartment.

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

3. A home economics trained person should be held responsible at all times for the nutrition program of the school. This may be directed by a nutritionist, the home economics teacher, or the cafeteria director (if adequately trained).

4. The school lunchroom is and should be a vital factor in the school health program and this idea should be fostered at all times by a trained home economics person or a trained dietitian. At no time should the function of the school lunch department be exploited for the purpose of making money.

5. The health education work that permeates the home economics course should be a part of the boys' school training as well as the girls'. Provision should be made for the boys to have an opportunity to take this work, including nutrition, food selection, care and selection of clothing, child care and training, budgets, and the family.

6. The home economics department should utilize other courses in every way possible and thus work toward a coordinated health education program.

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STANFORD UNIVERSITY

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Chapter VIII

MENTAL, EMOTIONAL AND SOCIAL HEALTH

MENTAL health is concerned with the mental, emotional and social ability of the individual to meet his environment and to make necessary adjustments to it. Adolescence is a pivotal point in the physical, mental, emotional and social development of the individual. Mental hygiene, therefore, should be an integral part of the educational training of youth.

Some Characteristics of Adolescence[1]

During the early part of adolescence a spurt of physical growth takes place. In spite of certain physical weaknesses that attend the rapid growth of this period, adolescence is marked by increased vitality and vigor. There is an influx of physical energy which is manifested by increased restlessness and participation in vigorous exercise.

The scope of feeling and thinking widens and deepens during adolescence. There is increased mental activity and energy. There are new interests, new ambitions, new urge toward inquiry, new zest for meeting the realities of life. Action is less imitative and becoming more volitional. Because the control of conduct by intelligence is not yet fully established, rapid changes in moods and tempers characterize this period. There is a new self-respect, a reenforced desire to be of more significant service to others, and a reborn desire for social approval on a higher level than that of childhood. Relative instability and change mark the period of adolescence; old forms of reaction are being interrupted; old habits are disturbed or broken up; and new forms of behavior are becoming prominent.

[1] Frederick Tracy, *The Psychology of Adolescence*, New edition. (New York: The Macmillan Company, 1922) pp. 16-19.

Some Difficulties of Adolescent Adjustments[1]

1. The Struggle to Face Reality

Children who have been trained to face reality habitually, are well prepared to meet each new experience frankly and to make proper adjustments to it. Adolescents thus trained are fortified against nervousness and mental ill health. Many poorly prepared adolescents, however, find day-dreaming and other means of refuge from reality satisfying and are reluctant to face life. As a result, they find contact with life unpleasant and difficult, they avoid meeting reality, and they increasingly withdraw into a world of phantasy. The use of day-dreaming by the adolescent as a refuge results in his becoming detached for long periods, gazing dreamily out of the window when effort is required of him in the classroom, and avoiding companions and others in his environment. In extreme cases, day-dreaming may be the forerunner of mental disease called dementia præcox. In all cases, however, the avoidance of reality by the adolescent unfits him for making wholesome adjustments to life.

2. Inability to Gain and Maintain Independence of Thought and Action

This interference in proper adolescent adjustment is the result of too long and excessive dependence upon parents, teachers and others. Such dependence deprives youth of opportunities for meeting reality.

3. Feeling of Inferiority

The adolescent is conscious of new powers and a new urge to explore his powers. When deprived, however, of full opportunities for exploring his new capacities and for true self-appraisal he is deprived of the spring board of self-confidence. When he has been unable to measure or test himself by the demands of his environment, he knows neither his strength nor his weaknesses. As a result, he often feels inadequate to the demands and experiences of life. The feeling of inadequacy in adolescence is manifested either by timidity and withdrawal

[1] G. K. Pratt, "Youth and the Dragons," *Survey* LIII (January 15, 1925), 475-7.

from full participation in life or by the display and tactics of the "bully." However manifested, a feeling of inferiority renders impotent whatever potentialities the individual may have for health, happiness, and success.

4. Excessive Development of Interests in Religious Matters, Pathologic in their Intensity

A development of interest in things religious normally characterizes adolescence. A wholesome reverence for religion is conducive to mental health. An excessive and intense interest, however, in religious matters during adolescence tends to distort the personality and increases the difficulty of an adequate and wholesome adjustment to life.

The School's Responsibility

Mental, emotional and social habits, like physical habits, are largely a product of training. They are, therefore, amenable to education. During every waking hour the adolescent is reacting to situations in his environment—whether it be in the school, in his home, in his play, or in his work. Through these experiences he acquires ways of meeting situations pleasant and unpleasant, ways of looking at things, ways of feeling about things. The adjustments the adolescent learns to make in contact with his environment help to determine his mental, emotional and social development. They forecast his success and happiness in life. The school's responsibility, therefore, for the inclusion of mental hygiene as an integral part of the education of adolescents is definite and of paramount importance.

Some Essentials of the Mental Health of Adolescents[1]

The mental health of adolescents requires the fullest application of the educational essentials which Dr. W. H. Burnham calls the "Imperatives in Adolescent Training."

1. Self-Discovery

The adolescent is of a strong exploratory turn of mind. The discovery of the fullest extent of his powers through ade-

[1] W. H. Burnham, "Imperatives in Adolescent Training," *Survey* LVI (May 15, 1926), 257-9.

quate opportunity for exploration depends upon the richness of the school environment. The introduction of varied subject matter, of many activities, and of a variety of interests into school programs gives to adolescents opportunities for exploring their capacities and for getting a valuable insight into their recently acquired powers. Self-discovery is basic to self-confidence and self-direction, the acme of mental health.

2. Integration of Personality

Integration of the personality is the chief end of mental hygiene. It requires the fusing of all of the individual's mental and physical effort upon some situation or object.

Concentrated attention is temporary integration. Development of the powers of concentration during adolescence is a safeguard of personality. Every adolescent should have some all-absorbing task, which will unify the many new interests and activities of the youth otherwise discordant. This requires a modicum of direction from the teacher; a fair amount of freedom of choice by the student; and skill in teaching technique.

3. Doing of Worth While Tasks

The adolescent who is given a fairly rich environment and a reasonable amount of freedom is likely to discover that he himself can do something well, something that is worth while. This bit of insight into one's capacity and the increased self-confidence are likely to become a driving force in the life of the adolescent.

4. Successful Accomplishment

Achievement gives a stimulus which is essential to the development of all individuals. Through the performance of chosen tasks the youth achieves a fair amount of success, learns his weaknesses, and acquires a wholesome modesty. Repeated failure is a disaster, because it robs the youth of his initiative and incentive for action and produces a feeling of inferiority. Among the obstacles to success in school are the indiscriminate mixture of students of various mental abilities, large classes, and false educational philosophy. To assure youth opportuni-

ties for a fair amount of success requires a careful study of individual children and the fitting of the curriculum to the capacities and interests of adolescents.

5. Development of the Fundamental Social Virtues

Since at adolescence the individual develops a social consciousness and a consciousness of a larger self in relation to others, it is desirable to develop right social attitudes and interests in great social movements, such as efforts for hygiene and public welfare, social psychology, the various forms of social service and organized philanthropy. The community of every school abounds in opportunities for worth while social tasks.

6. Social Success

Perhaps nothing promotes mental health in adolescence so much as opportunities and ability to render social service. The success of the service is an incomparable reward to youth. Occasions for service to others are numerous in the school and community and should be employed for the training of adolescents.

The greatest good from the use of such training is achieved when each child has an opportunity for individual initiative for the common welfare, where the leader does not dominate the group but is able to integrate the whole and employ the superiorities of each member.

How Some Secondary Schools Promote Mental Health

The above essentials harmonize with the educational philosophy of secondary schools. The question arises, however, what is actually being done in secondary schools for the mental health of adolescence? The reports of the schools which have cooperated in this Study give a partial answer to this question. In these schools the mental health of students is promoted by the personnel, by the administration of the school program, by the instruction and curriculum, by the physical and "extracurricular" activities, by the methods of discipline employed, and by the study of individual problems.

Contributions of Personnel to Mental Health

It is of first importance that there be a consciousness of mental hygiene not as a sex problem, nor as "bad boy or girl" problem, nor as a situation that will take care of itself if left alone, but as a need of every adolescent boy and girl in school. The development of healthy personalities in adolescents requires the thought and effort of every member of the teaching staff. Although trained persons only should undertake the task of individual adjustment problems, yet every teacher should know the general principles of mental health and undertake to apply them in their classrooms and in the general educational procedure.

An example of the subtle contribution the teacher makes to the mental health of pupils is the teacher-pupil relationship in meeting school problems together. In one of the schools visited, an important observation was that the boys and girls were not repressed nor was response delayed in school situations. There was a normal and immediate response to stimulus. For example, a discussion arose in class relative to the critical attitude of some of the new teachers toward the students. In the discussion, the students accounted for this attitude as due to the teachers' misunderstanding of the freedom employed by the boys and girls in their contacts with instructors. They decided, therefore, that they would be more careful in their contacts with the new teachers until the teachers became accustomed to the students' attitude toward them. In this instance the teacher and students together found the satisfactory way of meeting this situation. It required of the teacher an appreciation of the adolescent and a sound educational philosophy deftly applied.

Such experiences of students have a definite "carry over" beyond the classroom. During the free period when the teachers were at lunch and the students were free from classes, the visitor had an opportunity to talk with individual boys and girls without previous arrangement. She found them invariably courteous and considerate. They promptly sought an unoccupied room and provided chairs for their guest and themselves and gave close attention to the questions asked. They

easily and readily met the obligations of hospitality. The visitor's questions as to their opinion of the school met with immediate responses. They were earnest in their endeavor to give a fair opinion of the school as a whole. Their poise and ability to meet adequately this situation were evidence of the contribution teachers make to mental health.

Some of the schools are wisely attempting to give to each teacher an appreciation and understanding of the needs of adolescents. In order to make teachers more familiar with the period of youth some of the staff meetings in a few of the schools are utilized to individualize pupils or to study the problem of adapting work to the individual. In one school, papers prepared by members of the faculty who are familiar with the psychology of adolescence are presented for discussion. The topics cover various phases of adolescent psychology and the treatment or purpose of mental tests in secondary schools. In proportion as the teacher appreciates adolescent interests and problems, is he able to fit the activities of the classroom to individual boys and girls and in this way provide for the optimum development of individuals.

Since the influence of the teacher's wholesome personality is so important in the mental health of students, it is highly desirable that schools have employment and certification qualifications relative to the mental health of teachers. It is equally important that schools promote the mental health of teachers in service and provide them with opportunities for fullest self-realization. Healthful personalities among teachers help to insure the development of wholesome personalities among students.

In a few of the schools, specialists or semi-specially trained members of the staff are employed to promote mental health among students. At the time the various reports were made, one school employed a psychiatrist; a few employed trained psychologists; two employed health counselors who coordinated all efforts to promote mental and physical health among the pupils; three had visiting teachers; and many were using the advisory system with a directing head, such as dean of girls, for promoting the mental health of students and for aiding students to make adjustment to the school environment. In mental hygiene, as in many other undertakings, good inten-

tions will not take the place of a trained, intelligent understanding of the problem.

Contribution of the Curriculum and Instruction to Mental Health

In general, the curriculum in the schools making self-studies contributes to the mental health of students incidentally, largely through the teaching process and through the provision of a wide range of subject matter. As an educational procedure, the problem method has won its merited recognition. Its importance in the mental hygiene of adolescence is unquestioned. A chosen task, a selected plan, and freedom to work out the plan, with guidance and not interference, are considered by Dr. W. H. Burnham as the teacher's important contribution to the integration of personalities during adolescence.[1] It holds attention to the "job in hand" and through concentration it builds in the individual the habit of integration. When the problems tie up the classroom work with the community in which the student sees himself—herself—in relation to the large social group, their contribution to the normal natural social development of the individual is heightened. Through problems the student finds himself face to face with life, and he is able to explore and to test his powers by adventures and experiences in reality. Day-dreaming becomes difficult in the face of life experiences. Social science, general science and biology are rich in opportunities for such exploratory adventure, for developing desirable social attitudes and for achieving social success through social service.

An important contribution which the various sciences can make to mental health is the inculcation of a "scientific point of view." The creation of a "scientific point of view" in pupils provides them with a means of adapting themselves to the change and complexity of life situations. This is particularly necessary in matters of health where change, even contradiction of views and beliefs, accompanies the development of health knowledge. The recent change in view concerning ventilation is a striking example of a shifting of emphasis in practices through a change in knowledge.

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[1] W. H. Burnham, *The Normal Mind*. pp. 205-229.

In two of the schools the curriculum is made to contribute to self-discovery by giving to the students an opportunity to explore their own fitness for various vocations. The director of one school says:

> That division of my school for the children of early adolescence must provide opportunity for exploration. It must enable them to explore their own capacities and tendencies and inclinations. For the great mass of boys and girls in America these years are now the last in school. The choice of occupation is forced upon them early. They must be making decisions. It is our obligation to them to provide a school situation in which they may test themselves, in which they may have some experience in the great fields of human endeavor. The curriculum, in my judgment, should not be vocational but prevocational. It should be such as to open their eyes to the work of the world; to see what they may do and to be guided, as far as it lies within the power of teachers and parents, into wise choice. For those who are not leaving school, who will go forward to completion of high school and possibly of college, the immediate necessity of choice does not exist, but they, too, need to begin to think about these matters and to see themselves more clearly in relation to the work of the world.[1]

A second school describes a commendably practical plan for bringing students in contact with various vocations. On various trips to a variety of business places the students observe some of the work or processes connected with particular kinds of commercial activities. They make a study of the hazards in them, of the safety devices, the qualifications for doing the work, etc. They then freely discuss their preferences for vocations and their fitness for them. Such measuring against reality, with skillful avoidance of introspection, gives to adolescents experience in proper self-appraisal, and insight into their capacities.

At present, there is very little, if any, attempt made to offer specific courses or talks in mental hygiene to students of adolescent or preadolescent age. So far the mental hygiene of adolescents in school has been concerned very little with set or planned courses of mental hygiene. It has been concerned rather with the emotional and social reactions of the students to reality and with the provision of an environment for youth which is conducive to hygienic living. In the case of social hygiene or sex education, however, instruction is put into the curriculum in various ways. The place in the curriculum that

[1] Wilford M. Aikin, "Educational Phases of Early Adolescence." *Transactions of the Second Annual Meeting of the American Child Health Association.* (New York, 1924), p. 127.

is best adapted to this instruction is in biology. Some of the schools, however, have made much of this instruction incidental to nature study in the lower grades, reserving such topics as heredity, eugenics, etc., for the adolescent years. Contrary to the past custom of including in sex education for adolescents a consideration of the social diseases, one secondary school not included in this Study treats these diseases as communicable diseases and gives instruction concerning them at the time communicable diseases are considered. The elimination of morbid fear and of disease from the subject of sex education leaves that subject with fewer difficulties involved.

In the secondary school situation, because of the sectional or departmental organization of the curriculum, the use of the bulletin seems to be growing in popularity as a means of instruction. One high school has used the bulletin for furthering mental hygiene. The following health bulletin issued to students gives twelve principles for mental, emotional and social health:

A Sound Mind in a Sound Body[1]

Physical health means little unless it brings mental health. Nervousness, inefficiency, unreasonable likes and dislikes, absurd fears, jealousy and outbursts of anger signify mental ill health. Poise, self-control, and cheerfulness, together with physical well-being indicate mental health.

The following suggestions will aid you in developing the proper attitude toward mental health and will point the way to efficiency and happiness:

1. Learn to face every problem fairly and squarely. By shirking responsibilities, dodging issues, and procrastinating we are running away from the facts of real life. This method never helps to conquer problems.
2. Concentrate on a task until it is conquered. Only in this way may we become strong. Meet your problems by activity instead of by day-dreaming.
3. Harden yourself to criticism, slights and dislikes. Most of these come from a failure of other persons to understand you. The oversensitive person is an unhappy person.
4. Guard against developing a feeling of inferiority. Such a feeling is usually unwarranted, but by cherishing it your efficiency and morale are undermined.
5. Learn to relax. Relaxation is the greatest enemy of fatigue.

[1] "Typical Health Bulletin," *University High School Journal* (Oakland, Calif.), VI (June, 1926), 134.

6. Try to conquer your fears. Most fears are the result of certain childhood experiences. Drag your pet fears into the daylight and dissect them. Find out if they have any sensible basis in your present-day life. In all probability they are simply carry-overs from childhood. Conquer them and you have destroyed a serious obstacle to your progress.
7. Set up for yourself a regular program of exercise. Let this be a game or some form of exercise that you enjoy. Get the habit.
8. Embarrassment and shyness are obstacles to progress. They may be overcome in time. Strive constantly to vanquish them.
9. Expressions of jealousy, hatred, and outbursts of anger may stamp us as weak and without character. Furthermore, they react adversely upon us, physically and mentally. They are indications that we are out of adjustment with our environment. Usually, the trouble is with us, not with the environment.
10. Engage in some of the social activities of your school. Active participation in school activities is excellent training for mental health.
11. Set up a wholesome, courageous, healthful phlosophy of life. Have a definite goal. Keep your best ideals ever before you. Efficiency and happiness will come.
12. If you are worried over some problem or personal weakness, first recognize the cause, then seek the help of some understanding friend who is more experienced in life than you. Do this early and your chances of success are sure.

At present the chief contribution of instruction to the mental health of adolescents is incidental, but none the less important for that. It makes essential the employment of the best educational methods by the best trained teachers. Where there has been an effort to give direct instruction, it has been done by a specialist in the field of mental hygiene.

Contribution of the Administration of the School Program

The provision for individual differences in schools tends to prevent maladjustments and to promote the development of normal personalities among children. In the Twenty-Fourth Year Book of the National Society for the Study of Education, Dr. Sutherland,[1] in summarizing "Factors Causing Maladjustments," says: "This failure [to recognize individual differences] manifests itself in certain bad habits fixed upon the children. These habits include the habits of failure, the habits of half-done work, the habit of work below one's full powers,

[1]Part II, pp. 1-80.

the habit of shirking." The results of mental testing are used by many of the schools as a basis for classifying students into homogeneous groups. This plan of using the mental equipment of students as the chief determining variant for classification, however, needs to be supplemented by other considerations. In one school, the basis of section making is a competitive prognosis test of the capacity of the student for doing the work in a specific course. This test is supplemented by records of general mental tests, former grades indicating past achievement, and the opinion of the teachers. The sectioning is provisional and flexible, permitting of rapid promotion or demotion. There are three sections in each subject, according to the mental levels, and the subject matter is fitted to the ability of each group. A student's classification varies in each subject; for instance, he may belong to A classification in mathematics, to B in science, and to C in English. This is an interesting attempt to meet this problem and seems to offer splendid opportunities for self-discovery and for the achievement of success by every student. The general physical health of the student, however, might well be considered as a factor also. For the safeguarding of student classification according to abilities, it is essential that teachers have an understanding of its significance and a knowledge of tests; otherwise, what has promise of being an asset is likely to become a liability. Other schools report the use of the Dalton Plan, in order to free students from the "lockstep" method and to permit them to carry the load best fitted to their separate abilities.

In the administration of many of the schools which made a self-analysis in this Study, there is a noticeable effort to employ rhythm in the arrangement of the day's program. As an example of this, one school distributes the activities of the school day for a profitable use of the time as follows:

> In our school . . . the pupils are present from 9 to 5 o'clock. Their long school day must not only be free from strain, but it must be so divided and arranged as to contribute most adequately to the profitable use of those hours. In the middle of the morning we have an open period when the pupils are free to engage in their various club and group activities. At no time in the day do we have more than two class periods in succession. We take a full hour for luncheon and subsequent relaxation; we sit down at tables and eat a good square meal, thoughtfully planned and well

prepared. We eat it leisurely and we try not just to eat but to dine. We have a half hour following the luncheon for relaxation or recreation and later a full hour and a half for wisely directed physical training, not for the team, but for every pupil. Then a return to classrooms for supervised and directed study, laboratory and shop, home economics and the fine arts, and preparation for the next day.

As much care is essential in arranging the program of the short day as for the longer one. Health of pupils (and of teachers), and not expediency, should be the chief factor in program arrangement.

Contribution of Extracurricular Activities

A few of the schools in the Health Study recognize in extracurricular activities the opportunity for developing self-direction and for promoting mental health among students. These activities are the expressions of basic adolescent interests and when rightly administered and properly diversified, offer desirable opportunities for students to explore their capacities, capabilities and interests.

In some of the schools, normal social relations are definitely furthered in the extracurricular activities. To further the social relations, one school promotes the use of a full hour for lunch in an attractive room, with pleasant conversation and considerable fun among students and faculty. The list of activities varies from supervised social parties only, in some schools, to an extensive variety of athletics, journalism, student government, etc. The richer the variety of activities provided the greater is the opportunity for promoting mental health. Certain safeguards are used for the health of students to prevent overactivity. One school schedules all similar activities to meet on the same day; others use the point system; still others are tending to curricularize them. The Twenty-Fifth Year Book on Extracurricular Activities includes a rather detailed account of the administration of these activities in Tulsa, Oklahoma.[1] A definite plan is undertaken there to promote the socializing influence of extracurricular activities. While all adolescents are fundamentally active and require expression for this instinct for action, yet the activities require organiza-

[1]Merle Prunty, "Local Practices: Tulsa High School." *Twenty-Fifth Year Book of the National Society for the Study of Education*, II, 187-204.

tion and proper administration for developing capacity for responsibility, concentration, emotional control, orderly association, normal expression of feeling, attitudes of success, and the development of all members of the group rather than only a few outstanding members. Without organization, which grants opportunity for self-direction on the part of the students themselves, activities tend to become aimless and futile.

An important part of the organization of so-called extracurricular activities is the employment of qualified advisors. The organization of a home room activity by an advisor in one of the schools illustrates the kind of outcome that might be expected from such organization:

> Group of twenty-four junior girls, with Latin teacher as advisor. Student chairman in charge; teacher seated in back of room. Subjects: Uniform class rings discussed; voted down. Talk on "Opportunities for Boys and Girls Today" and questions raised. Student from Senior Room talked on "Standards We Set for Our Classmates"—honesty, industry, congeniality, and courtesy. It was a sincere, practical talk of ten minutes. The discussion following for fifteen minutes was not moralizing, but grew vigorous and practical. It spoke volumes for mental hygiene and social adjustments.

In the same school, in a group of ninth grade boys, the question of a time budget for study was being discussed. This effort to guide them in self-direction for more profitable use of study time and for concentration met with constructive response from the boys.

Much has been written concerning the use of physical education activities as opportunities for normal reaction to stimuli, and for training in concentration and integration of the individuals concerned. In secondary schools in the past this valuable experience has been restricted largely to the chosen few called the "team." There is a tendency at present on the part of some secondary schools to give all students that development and opportunity for game or athletic excellence that has been possible for only the few members that make up the team.

From these self-studies and other contributions, it may be concluded that extracurricular activities have potentialities for mental and emotional health in proportion as they are organized for the self-direction and socialization of students. To safeguard the students from overactivity and overstimulation,

it is necessary to safeguard in some way the number of activities each student is permitted to enter.

Contribution of Discipline to Mental Health

Perhaps the discipline of the adolescent has even richer opportunities for promoting the mental health of youth than any other situation in the secondary school. Some of the schools in this Study have wisely given students a fair amount of freedom and control in matters of student discipline. The importance of such a social task is paramount in the adolescent period. It gives opportunity for social service, for developing proper social attitudes and interests and self-control, and experience with true life situations. Some of the schools give to students the task of maintaining discipline in the school during lunch hour. In two of the schools the discipline of the "cafeteria line" is maintained by students. In one school supervision of younger children is given over to the students of the high school. Many situations of group discipline are legitimate tasks of adolescents. And it is a serious oversight when they are deprived of opportunities for group control. In one of the schools visited several of the senior students said that they considered their experience in student government as the most valuable experience and training that the school had given them.

Contribution of the Study of Individual Students to Mental Health

With all of the efforts to promote the positive mental hygiene of the group of students, there still remain a few who need individual help in making their adjustments. A few of the schools who attempt to meet this need are doing so by employing trained psychologists, or visiting teachers, or by the use of other members of the faculty. Where members of the faculty who are not especially trained are used for aiding in individual adjustment problems, it is largely the duty of advisors. The value of advisors untrained for this and unguided is probably very limited if there is any value at all. These individual problems involve the whole child, and a study of the physical, mental, emotional and social child is essential to

his successful guidance. The individual problems are solved usually by making an attempt to find the cause, either within the child himself or in his environment. The boy or girl is guided in making the adjustment on the basis of the discovered cause of the maladjustment. The following description of the case work done by a trained psychologist in one school indicates the kinds of maladjustments found in individual cases:

One of the most important phases of the psychologist's work is to make psychological case studies of the children showing special problems in their school life. During the past year we have not had the time to take up many of these problems, but we expect to give more time to this part of the work next year. We have listed below the types of problems that have been studied this year:

1. The child who does not want to do the school work.
2. The child who is not happy in his school life.
3. The child who does not make a satisfactory adjustment in his social activities at the school.
4. The child who fails repeatedly in his work.
5. The child who is not doing work commensurate with what should be expected of him according to the degree of his mental ability as shown by psychological tests.

The study of these cases includes facts concerning the following phases of the child's life:

1. Facts obtained by the use of psychological tests concerning the child's mental equipment, his character traits, his special abilities and his actual achievement in school work.
2. Qualitative evaluation of the child's personality and character traits by the psychologist and the members of the teaching staff.
3. The relationship to the parents and the conditions of his home life.
4. His behavior in play activities and with associates.
5. His previous preparation in school work and his present standing in each of his school subjects.

From a study of this data, conclusions are drawn concerning the nature of the difficulty, and recommendations are made which are directed toward the solution of the problem.

The visiting teacher, within the limits of her training, makes a study of the cause of the maladjustment and undertakes to help the child make the normal adjustment. She makes use of the child's physical and mental tests and holds conferences with the child and with his teachers and parents, to discover the cause of his difficulty—to find why he "hates" school, does much less than his best in his subjects, why he is a "bully" and the like. With this knowledge and the aid of various social agencies, she is able to aid materially in helping him make

the proper adjustment. Proper adjustment means mental and social health.

Where advisors are used, they are expected to render service in individual cases similar to that of the visiting teacher. This, however, requires time allotment in the advisor's schedule and either a certain type of training or else guidance by the one in charge of advisors. For the assistance of individual students, various members of the faculty other than advisors are used. Where this is done, it is found advisable to use only those persons who have some very real understanding of child psychology and a sympathetic understanding of the adolescent. Guidance by a properly trained person is essential where teachers are called upon to aid in the individual adjustments.

From this study of the methods of helping individual students, the conclusion is clear that, as before stated, it takes more than good intentions to help individuals solve their adjustment problems. It requires training and intelligent understanding, and a well integrated personality in the person who is to give this help, and the help must come from an adequate study of the child and of his home and school environment.

Summary

1. Mental hygiene should be a prominent principle of procedure of every secondary school, rather than a definite stated program—the concern of every department and every member of the staff.
2. Every teacher should appreciate and apply the principles of mental hygiene in teaching and in her mode of living. Unity and continuity however, in the undertaking comes with the use of specially well trained people such as psychiatrists, psychologists, qualified advisors, deans or health counselors. If teachers do not already have this interest in or appreciation of mental hygiene, there should be a definite program or attempt to create it through conferences, courses and the like.
3. The day's program should be so arranged that work requiring mental concentration is followed by some kind of activity that requires "doing" or self-expression.

4. Adaptation of the curriculum to the capacities and interests of adolescent students is essential to mental health.

5. Up to the present time, the curriculum has been best employed as an incidental, rather than as a direct factor in mental hygiene. Where definite instruction is given it has been through bulletins giving positive principles or guides of behavior. The chief contribution from the field of instruction lies, however, in the problem method of performing a chosen task, with a selected plan, and freedom of the child to work out the plan, with guidance, and not interference, from the teacher.

6. The maintenance of group discipline is a legitimate task of adolescents.

7. "Extracurricular" activities furnish opportunities for the development of concentration, employment of the new and varied interests and powers of the adolescent and varied experiences in meeting reality.

8. The average maladjusted child is not born but made. He is not just the child who gives trouble and causes annoyance, but he is any child that makes an unsatisfactory adjustment to his environment. The study of the maladjusted child should include a consideration of the physical, mental, emotional, and social aspects of his development and a thorough understanding of his environment—home, school, and community. Only trained persons should undertake to direct or guide the adjustment problems of maladjusted children.

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* See references suggested in footnote, pages 22 and 23.

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Chapter IX

CHECKING UP ON RESULTS

WHAT results related to personal and community health, either in habits, attitudes or knowledge, do you achieve through each course? How do you check up on these results?" The answers to this question in the Secondary School Study show a need of establishing some common base lines for measuring results in health education. There was much confusion in many of the reports from the schools making the Health Study—results were confused with educational objectives, subjective opinion with objective measurement, etc. Because of this confusion and the absence of common measure, there are no means of comparison of results within schools and between schools. Measurements should serve first as a means of determining progress toward goals by comparing present achievements with the past and, second, as a means of comparing results achieved in one situation with those achieved in another.

The measures described in the reports for checking results were mainly subjective opinions. It is, of course, valuable to estimate improvements even though this estimate is unobjective. It leads to analysis and self-criticism even though it cannot be used to compare results before and after a given procedure nor between two cities using different procedures. In order to achieve such comparisons we must have objective measures which would be the same, irrespective of the examiner. Objectivity may be explained by the following quotation: "Will the test lead to the same conclusions independent of differences in the personality of the examiner? It should have been proven that the giving and the scoring of a test by any one person results in substantially the same verdict in regard to a group of children as the giving and scoring of another form of that same test by another person."[1] The Gates-Strang Health Knowledge Test illustrates the essential principle of objectivity of measurements.

[1] R. H. Franzen and W. H. Hanlon, *The Program of Measurement in Contra Costa County*, p. 15.

Many of the measures reported were estimates of objectives of education but whether or not they were valid measures of the result of health teaching and training was uncertain. Measures must be a valid means of measuring the trait, or traits, being studied. By validity we mean: does the test measure what it purports to measure or what we want measured? If some of the children have a wide knowledge concerning proper nutrition and some of them a very scanty knowledge of the subject, and the test fails to reveal these differences, it is not a valid test for it fails to measure what we want measured.

If the health habits of a group of children have been carefully studied, the children ranked in order of their performance of these health habits from the highest to the lowest and if a test of about twenty-five items on health habits should place the children in exactly this same rank, then the test is a valid test. It could later be applied to children anywhere and the health habits of these children measured.

And again, if measures are to serve their purposes, they must be reliable. Some of the measures reported were unreliable estimates of the conditions. Were the same conditions again measured by the methods used, it is very doubtful whether the same results would be obtained. The proof of reliability lies in the recurrence of identical results upon each application of the test. For example, suppose the lunch trays of a group of children are checked for nutritional value on Mondays and Wednesdays for two weeks and the children ranked in order, and two weeks later the test is repeated on Tuesdays and Fridays and the children are placed in the same rank, then the test is reliable. To meet the purposes of measurements, then, the measures must be objective, valid and reliable.

The following are the results given in the reports that seem concrete enough and with adequate check to be sure that a real improvement has taken place.

1. More interest in general appearance as checked by personal observation of improvement in dress from day to day.

2. Weight* improvement as shown by decrease in one class of underweight children from 38 to 14 per cent.

3. More interest in community life as checked by voluntary photographs by the children of community problems which needed attention.

4. Better meals selected in the lunchroom. The check was a personal observation of the class by the home economics teacher. This result is subject to the error of subjective judgment but we may assume that some improvement did take place.

5. The knowledge concerning food values checked by tests. If the tests were adequately scaled and achievement differences between the first test and the last test occurred, then it is probable that the instruction has resulted in this enlargement of the child's knowledge of health producing behavior.

Posture

Where any method of measuring posture at all was used, it was one of the four following:

The straight line test recommended by the Posture League.
The Bancroft triple posture test.[1]
The schematograph.[2]
Flexibility test.

None of these methods of measuring posture have been validated except in terms of subjective opinion. It is very doubtful whether the flexibility test measures posture, or at least from logical considerations it would seem that it does not measure the same thing as is measured by the other three tests. The schematograph, the Bancroft triple posture test, and the straight line test are all rating scales and as such are necessarily very subjective. It has been found that there are many wide disagreements in the rating of posture on the same child by two people who have studied posture rather thoroughly. When posture is rated by persons inexperienced in the subject

*For research findings and the significance of measurements of height and weight in health education, see references in footnote, p. 14.

[1] Jessie Bancroft, *Posture of School Children*, pp. 197, 238.

[2] *The Mosher-Lesley Schematograph.* Mrs. M. T. Volk, 7815 76th Street, Glendale, Long Island.

of posture, the differences are even wider; in fact it was found that some rate one child "A" while another person rates that same child "D".[1] Therefore, it is imperative that before a posture program can be evaluated in terms of the improvement of the posture of the children, a valid, objective and reliable test of posture be constructed. This is a challenge which several organizations interested in posture are taking up and they hope for definite results sometime in the near future.

Boys' Athletic Program

Checks were made on three concrete aims in the boys' athletic program:

1. "Every boy in athletic competition" was realized by voluntary participation in sports and games by every boy in the school. This is an objective test if actual counts were made and if the whole school population was taken into consideration. It is very easy to be misled by the appearance of an athletic field after school when it is full of active children. Sometimes when an actual count is made of the children there and of those who have gone home, the proportion is disappointing.

2. Physical efficiency measured by:

a. Reduction of absentees. This is an objective test but not a valid one because of many influences other than athletics. For further reading on this subject, see "Factors Controlling Attendance in Rural Schools" by George H. Reavis.

b. Physical efficiency tests[2] at the beginning and end of each year. This is an objective and a valid test but not necessarily related to health.

3. Production of winning teams. This is both an objective and a valid test and if at all related to health, it may be on the negative side.

Girls' Athletic Program

Checks were made on two concrete aims in the girls' athletic program:

[1] Annual Report of American Posture League for 1928, pp. 10, 11.
[2] J. F. Bovard and F. W. Cozens, *Tests and Measurements in Physical Education.*

1. Every girl participating in athletic activities and every girl on a team. This is an objective test if actual count were made.

2. Physical efficiency measured by tests. Objective and valid but not necessarily related to health.

Summary

1. Whatever techniques are employed or purposes of measures are sought in health programs, the principles of objectivity, reliability and validity are essential to the usefulness of measures.

2. There is still need of developing common measures of health work which can be used in any school situation so that the results can be compared with results obtained elsewhere.

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* See references suggested in footnote, pages 22 and 23.

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Chapter X

BUILDING A HEALTH PROGRAM

Suggestions for a Constructive Use of the Secondary School Study Outline

FOR any constructive work there are four essentials: workmen, tools, material and a plan. To build well, the workmen themselves must have complete and first-hand acquaintance with both material and tools, and must understand the plan into which their specified work is to fit. It is suggested that one of the most practical and effective methods by which the activities of a school which are related to health may be appraised, is by self-study. The following outline is offered as a rough sketch of the steps by which such a program of self-study may be organized and put into operation, together with suggestions as to the outcome which might be expected.

The Formation of a Study Committee

Composed of the administrative head and the heads of the various departments, the function of this committee should be:

a. To examine into the strength and weakness of the administration of the school for the protection and promotion of the health of its pupils.

b. To analyze the activities and the contributions of the various departments as related to health.

c. To build up and unify a health program on the basis of this study.

Initiation and Development of Self-Study Schedules

This Study Committee should prepare several interlocking schedules for examining the activities of the school in relation to health. The material offered in the secondary school Study Outline (see pages 4-11) might be used as a basis, rearranged to meet the needs of the specific school organizaton. These

schedules would fall into two main groups: (1) for examination into the administration and organization of the school, and (2) for analysis of the contribution of the curriculum to health.

1. Schedules for Administration

These should include some questions on admission, graduation, classification, pupil schedule, size and organization of classes, recreation, cooperation of community agencies, discipline, equipment and sanitation, teacher qualification, load of pupils and teachers, and social and mental adjustments of teacher and pupil.

In addition, these schedules should include questions designed to ascertain net health results from home economics, physical education, science, medical, dental and nursing services, etc.

2. Schedules for Analysis of the Contribution of the Curriculum (each developed by a committee with the head of the department as chairman).

a. *Science*

In addition to the major questions relating to details of courses in science, there should be questions on motivation, on the foundations laid for home economics and physical education, on the application made to health status of students, on relation to social adjustments and on relation to home, school and community health.

b. *Physical Education*

In addition to the major questions relating to details of physical education, this schedule should contain some questions relating to motivation, attitude, relations to health examinations, hygiene or biology, food habits, recreation of pupils and teachers, social adjustments.

c. *Home Economics*

In addition to the major questions relating to details in the field of home economics, this schedule should also contain a few questions on motivation, attitude, relations to the work of other departments, particularly those of science, physical education and social adjustments.

d. *Supplementary Subjects—English, History, Geography, and Arts*

The major questions here would relate to details of the various courses, but in addition there should be questions on motivation, attitudes, relation to social adjustments, and relation to home, school and community health.

Use of Schedules

1. Analysis

The principal, vice-principal, dean, medical officer, or others, whose duty is not teaching primarily but rather administrative or executive in nature, should independently analyze the school by the administrative schedule. A list should be made of the strengths and weaknesses of the school as shown by this analysis. The weaknesses which could be corrected should be underlined and a list of suggested recommendations for changes be made.

Each department head (or subject teacher in a small school) should independently analyze his or her department of class work by the appropriate schedule with the cooperation of the others in the department. The strengths and weaknesses of the department should be listed and practical plans for increasing the strength of the contribution of the department to the health work be drawn up together with recommendations for a possible reorganization.

2. Appointment of a Smaller Committee

This committee may be appointed by the principal to consider the reports from the various departments and to make recommendations. This committee should be small enough to work efficiently and need not include all the members of the study committees. The function of this committee should be the preparation of recommendations to the principal of steps needed to be taken as:

a. Program changes (school as whole), including doctor, nurse, psychologist, etc.

b. Schedule changes (individual—child and teacher).

c. Equipment changes.

d. Changes in procedures within departments—subject matter, methods, objective.

e. Changes in standards of promotion—graduation.

f. Changes in pupil record cards.

g. Other changes that may occur.

3. Group Conferences (decision on priority and practical measures).

Conferences between the administrators and the heads of the departments or different teachers (small schools) should be held to discover how the programs of the major departments can be modified to strengthen and complement each other mutually, and to make possible the changes which seem desirable, recommended by the administrator or committee groups.

Administrators and heads of the departments should also consider the recommendations of the smaller committee and decide:

a. What changes require money? How much each? Feasible to raise?

b. What changes require school reorganization? Feasible?

c. Vote taken on priority.

d. Responsibility for new project assigned to individuals and the date of this responsibility fixed.

e. Intradepartmental changes.

Follow-Up

As a result of above procedure, it would be possible for each department to chart on paper its plans for modification; to date the approximate time when each step would be undertaken and to list the requirements in money—time—equipment—personnel, as well as modification of aim and content. Such a record could be checked against, account-book style, from year to year. If copy were in hands of administrator (principal), latter could ask for statement of progress, when the annual report is made to him by department head or teacher. Such report might easily be based on the questions in the Administration Schedule which ask for net health results for each department.

INDEX

INDEX

Absences, School
  studies of, 36
  of teachers, 39, 48
Adolescence
  adjustment difficulties of, 128, 129
  characteristics of, 127
  "Imperatives" in training of, 129-131,
  Needs of, studied by teachers, 133
Adjustment
  of load to teacher, 43
  of school task to capacity of student, 13
  of student to environment, 31, 35
Athletics
  evidences of value of, 100, 101
  exploitation of, 106
  for boys and girls, 100
  interscholastic, 96
  use of physical examination, 95, 96
Bibliographies, 22, 37, 49, 62, 87, 107, 125, 144, 151
Bubble Fountains, 54
Checking Results
  of health instruction, 75-79, 116, 147-151
Child Care and Training
  courses in, for boys and girls, 115, 119
Clothing
  influence on health, 112, 113, 116
Club, Health, 116
Communicable Disease
  exclusion of pupil for common cold, 35, 73
  prevention of, 35
  study of absences due to, 35
Co-ordination of Health Activities, 13-18, 25
  confusion arising from lack of, 14, 18
Counselor, Health
  coordinator of health activities, 13, 14, 16
  duties of, in different schools, 14-18
  duties recommended for, 20-22
  necessity for, 19
  preparation for position of, 17, 19, 21, 22
  selection of, 17
Defects, Correction of, 32-34, 37
Examinations, Health
  correction of defects, 32-34
  correlation of, with home economics, 123
  correlation of, with physical education, 95
  extent and purpose of, 26, 27
    in different schools, 26
  follow-up work, results of, 33, 34
  interpretation and use of findings, 28-30
    in hygiene classes, 30
  in making individual adjustments, 31, 32
    in planning physical education program, 95, 96
  personnel involved, 26
  records of, 27
  value to students, 27
Gymnastics, Corrective, 98
Health Counselor, see "Counselor, health"
Health Education
  further training of teacher in, 46, 47, 61
  measuring results of, 147
  preparation of teachers for, 80
  See also, "Subject matter, health"
Health Program of School
  arrangement of school day, as feature of, 138-139
  improvement of, through study of health needs of pupils, 84
  plan for building, 153-156
  reorganization of school to care for revealed needs, 85-87
  responsibility for, 79, 80
  types of service included in, 12
Home Economics
  child care and training unit, 119
  contribution of, to health program, 111, 112
  cooperation with other departments, 117

courses in, for boys, 115, 119, 124
as developing health responsibilities in pupils, 112-116
health objectives of, 111-113, 115
home management cottage, 118-119
nomenclature, 109
place of, in the school program, 109, 112, 124, 125
promotion of nutrition program, 117, 118
scope of, 109
teacher of
her role in the health education program, 110, 111
must exemplify teaching, 111
needs knowledge of home conditions of pupils, 111
responsibility of, for lunchroom, 120
vocational health club, 116

Home Room Teacher
education of, by Health Counselor, 15

Hygienic Facilities
community responsibility for, 60
definition of, by different schools, 51
as demonstration material, 59
difference between possession and use, 51, 52
educational use of, 51, 52, 57

Ideal of Health, 4

Individual Requirements of Pupils, 141

Insurance for Teachers, 45, 48

Living Conditions for Teachers, 44

Lunches, School
as an educational factor, 120, 121
as practical work for home economics students, 122
students' choice of food, 55, 122

Lunchroom
educational use of, 57, 58
minimum standards for, 55, 123
place for social adjustments, 56, 121, 122, 138

Measurements, Health
of boys' athletic program, 150
of girls' athletic program, 150
concrete examples of, 148, 149
need of developing, 151
posture, 149
subjective and objective, 147
validity of, 148, 151

Medical Equipment, 56, 57

Mental Health, 127
contributions to
of administration of school program, 9, 137-139
of the curriculum and instruction, 134, 135, 144
of extracurricular activities, 139, 140
of school personnel, 132, 133
essentials of, for adolescents, 129, 131
group discipline as an aid to, 141
grouping according to mental capacity, as mental hygiene measure, 13
mental hygiene, integral part of training of youth, 127, 143
school bulletins as a medium of instruction in, 136, 137
school's responsibility for, 129, 131
special advisors, 141-143
study of individual problems, 141, 142, 143
of teachers, 133

Physical Education
ability tests, 104, 105
boys' rules for girls, 102, 104
correlation of, with health examination, 95
courses of sports included in, 90, 91
purposes of, 91, 100
relative importance of, for health, 94, 95
for girls during menstruation period, 96-98
giving every pupil the advantages of, 92, 93
leisure time use of activities taught in, 99, 100
posture and corrective gymnastics, 98
proofs of success of program of, 100-102
qualifications of teachers of, 92
recognition of individual needs, 93, 94, 95
time devoted to, 93

Physical Education Director
duties of, 105, 107
relation of, to coordinated health program, 20
responsibility of, for health instruction, 105, 107

Physician, School
duties of, 19

relation of, to coordinated health program, 19

Posture
measurement of, 98, 149
corrective gymnastics for, 98

Records, Health
purpose in giving complete picture of child, 27, 28
separate or composite, 28
recommendations for further use of, 37

Recreation for Teachers, 44

Responsibility for Health Program, 79

Science Education
contribution of, to health, 66-69
objectives of, 82, 83

Sex Education, 135, 136

Subject Matter, Health
checking results, 75-79
classification into basic, specific or contributory, 65, 66
the irreducible minimum, 86
results from instruction in particular subjects, 66-75

Supervision, Effect of on Health of Teachers, 46

Supervision, Health
correlation of, with other school agencies, 26
of individuals, 13
personnel involved, 26
purpose of, 25
recommendations for increasing usefulness of, 36, 37

Teacher's Health
adjustment of load, 43
health qualifications for employment, 41, 42
mental health, 133
money value of, 39
recommendations for promoting, 47-49
school's responsibility for, 40
value of, as example to children, 40

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